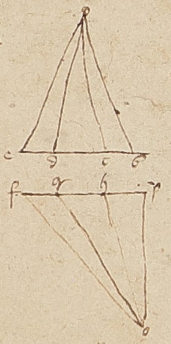
S. Marco
di Firenze

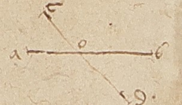
J 10 19

Bibliothece [illegible] ad s. maximini [illegible] 3

p Philosophi non ~~tantum~~ ab oculo radios visuales exire/ proba-
bant/ quod queque [illegible] per obstacula superficie discre-
verunt/ et tamen per [illegible] oculorum videndo/ vel ipse
colore [illegible] [illegible] [illegible] aut representarent/ quod et si fieret/ sed
non patet/ cum [illegible] tamen ita esse/ fingamus non quod de hoc velimus
sed ut per hoc facilius possimus [illegible]// linea recta dicitur videri
sub angulo/ quem continent [illegible] duo radii in [illegible] ad [illegible]
linee vise/ sub illo [illegible] angulo/ eo quod visus quo linea illa per-
[illegible] tanto [illegible] ambitu illorum radiorum [illegible] ut [illegible] supposui
ut [illegible]/ probabile est autem quod quanto magis radiorum [illegible]
[illegible] tanto magis [illegible] linee vise [illegible] videtur
tanto [illegible] linea ipsa [illegible]. [illegible] quanto angulus sub quo videtur
maior est/ tanto ipsa videtur maior// Patet [illegible] quod [illegible]
angulo [illegible] apparet/ quod sub maiori angulo maior quod [illegible]
[illegible] quod sub [illegible] [illegible] quod sub [illegible] [illegible]/ quod sub [illegible]
[illegible] quod sub [illegible] aliorum [illegible]// [illegible]/ sit o oculus/ ob/ oc
od/ oe/ radii [illegible] d e linea [illegible] sub o [illegible] angulo
quam c d. [illegible] [illegible] quam b c/ non quam d e [illegible] videtur
quam c d/ vel b c/ [illegible] [illegible] f g [illegible] of/ og
radii continent o/ angulum [illegible] quam g o g o h vel o h o p.
non quam f g/ videtur [illegible] quam g h vel h p [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] et [illegible] [illegible] [illegible] [illegible]
ut p o/ b/ [illegible] puncto/ [illegible] de linea/ angulo/ [illegible]/ [illegible]
[illegible] [illegible] [illegible] punctum videtur/ [illegible]/ Ut [illegible] precedentia videntur
punctum [illegible] radii visuales/ [illegible] punctum videtur// [illegible] a b linea
[illegible] videtur [illegible]/ [illegible] videtur [illegible] videtur [illegible]/ [illegible]
[illegible] videtur// [illegible] a b linea videtur [illegible] [illegible] [illegible]
[illegible] b/ [illegible] b/ [illegible]/ [illegible] videtur [illegible] b/ [illegible]
b videtur = [illegible] a b/ c d videtur [illegible]/ aut [illegible]
[illegible] aut [illegible] [illegible] videtur [illegible]/ [illegible] videtur
[illegible]/ [illegible] o/ [illegible] videtur/ = [illegible] angulus videtur [illegible]
vel [illegible] angulus in puncto/ vel aliquid circa punctum [illegible]
in puncto videtur quod [illegible]/ [illegible] videtur [illegible] angulo
[illegible] [illegible] videtur/ [illegible] angulo/ videtur// ad quod [illegible]
duo [illegible] radii visuales angulum continent/ [illegible] [illegible]
[illegible] [illegible]/ [illegible] [illegible] sub [illegible] angulo videtur/ sit
[illegible] o oculus [illegible] a b c d [illegible] [illegible] et [illegible]
[illegible] o b/ o d radii [illegible]/ ab/ o/ [illegible] angulum [illegible]
quod sub [illegible] angulo [illegible] [illegible] [illegible]/ [illegible]
ab/ a [illegible] b/ [illegible] [illegible] o/ et videtur/ o/ [illegible] o videtur
sub angulo/ a o b/ [illegible] o/ videtur [illegible] o/ angulo/ [illegible] non videtur
o angulo/ [illegible] o videtur sub a o b/ angulo sub [illegible] videtur [illegible]
[illegible] o puncto/ videtur [illegible] a b/ linee [illegible] vel a b [illegible]
simplex vel videtur [illegible] [illegible] [illegible] [illegible]// [illegible]

Tractatus primus de puncto



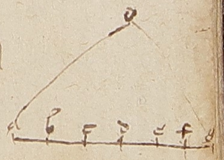


Et sic o videtur per quartum rectos a parte quo videtur obliquos / circumferentie quod circumferentia videtur per obliquos [illegible] Et sic o videtur per rectos / [illegible] [illegible]

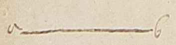
[illegible]

[illegible]

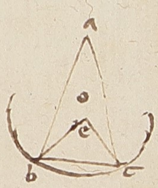
[illegible]



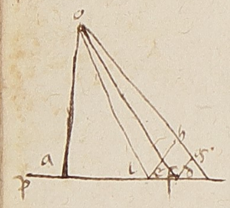
[illegible] ... vltimum punctus istius distorinatur

omnis convexitas super planum videtur // quod si dicatur quod
paries visus apparebit ab oculo in certa distantia / quocirca
linea / in quantitatibus magna / distantia ab oculo apparent partes
sunt in / paries apparebit quia tunc per uno radio videtur
multo maior linea quam per multos radios videtur apparebit
cum quod partes sit simplex linea continua / solutio
videtur esse visu [illegible] / videtur esse visu apparere [illegible]
[illegible] est videtur vel apparere / duplex [illegible] est communia [illegible]
[illegible] quod [illegible] ex [illegible] / [illegible] [illegible]
[illegible] est / quamquam per equales angulos apparent, equalia apparent / quod
obiciuntur / et offeruntur visui ut equalia quod per equales
angulos / non autem quamquam per equales angulos apparent / equalia apparebunt
non neque in utroque in aliquid videtur per angulo / et [illegible]
et apparent / dico quod quod paries videtur in [illegible]
visu sed non apparebit quod omnis partes visus videntur
equales in ut equales [illegible] per unos [illegible] radio / se offerunt /
visui non [illegible] videtur omnis esse / cum [illegible] quod ut
[illegible] videtur [illegible] ut [illegible] [illegible] videtur non
[illegible] in [illegible] visu apparent / [illegible]
aliquid [illegible] quantitatem vel colorem vel aliquid tale /
cum [illegible] [illegible] modo semper videtur [illegible] apparebunt
[illegible] ut si dicatur hoc videtur esse album [illegible]
[illegible] hoc linea videtur esse [illegible]
vel directum hoc videtur [illegible] hoc videtur [illegible] angulos
[illegible] talibus vel ad [illegible] [illegible] [illegible] sed videtur: [illegible]
[illegible] est / [illegible] quod [illegible] est / [illegible]
omnis paries videtur [illegible] vel [illegible]
in / non apparebit / sed obiciatur ab videtur [illegible]
et videtur non [illegible] / [illegible] / a ut [illegible] a

quo videtur ad a [illegible] // [illegible] ab videtur [illegible]
quo [illegible] videtur [illegible] videtur [illegible]
dico quod [illegible] valde o ex visus [illegible]
[illegible] a / b / [illegible] / quo [illegible] [illegible] visu [illegible]
esse / non [illegible] [illegible] ut paries [illegible] [illegible]
in speculo [illegible] / [illegible] / probatur / quod [illegible] videtur in
speculo [illegible] / videtur videtur [illegible] quam sit / paries autem
non [illegible] videtur [illegible] quam [illegible] // solutio [illegible]
[illegible] / et aliis [illegible] / simpliciter non //
De linea Tractatus secundus — [illegible] de linea et [illegible] / [illegible] est quod quamquam per
equales angulos videtur / videtur equalia / [illegible] radios

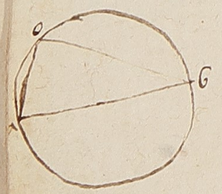
[illegible] quam exeunt ab oculo et ad [illegible] lineae visae [illegible]
et angulum continent / cum [illegible] linea / visa / quo / illa per illo
angulo / [illegible] // [illegible] sint a b oculi / a c ad b c b d radii
c [illegible] linea / est quod c b / radii / quo / radii [illegible] radii a c a d
continent angulum [illegible] [illegible] c d linea [illegible] / c d a / quod
c d videtur per [illegible] sed in angulus est equalis / [illegible] sit ita / quo
[illegible] / [illegible] in oculo videntis / quod [illegible] / quo c d quod [illegible]
videtur per angulos equales quo videtur equalis // [illegible] a oculo [illegible]
c d per c angulo / et [illegible] est maior quam c / quod est extrinsecus
ad c / quo [illegible] a pari quod [illegible] / est maior c / quo quod [illegible] videtur
per maiorem angulum quam c d videtur a oculo // [illegible] c d videtur
b oculo / per o angulo / [illegible] est maior o / quo / [illegible] / est maior
o / quo c d videtur b oculo [illegible] quod [illegible] videtur / quo quod [illegible]
maior quam c d videtur vel a oculo vel b / sed c d non [illegible]
[illegible] ab a / vel b / quo quod [illegible] videtur maior quam c d et [illegible]
quod c d quod [illegible] videtur equalis // [illegible] c d [illegible] [illegible] angulo
non in [illegible] / quod videtur per illo / quod si [illegible] [illegible] per
illo / videretur / quo [illegible] oculo / o / ab a et b / per [illegible]
[illegible] quod a / [illegible] / [illegible] / quod est [illegible] / [illegible] ab
[illegible] quod oculo [illegible] radii [illegible] non [illegible]
[illegible] [illegible] / sed [illegible] ut videtur [illegible]
hoc [illegible] / [illegible] dicatur duo radii exeunt ab uno
oculo ad [illegible] lineae visae / et angulum continent / cum [illegible]
[illegible] linea / visa / quo illa per illo / angulo videtur // [illegible]
sint a c b / speculum [illegible] [illegible] [illegible] extrinsecus
a / oculo / o / [illegible] a b / radii reflexus / super c /
[illegible] c c / c b / radii reflexi angulum c continent /
cum [illegible] c b [illegible] / visa / [illegible] uno est oculo
[illegible] / c b / quo c b videtur per c / sed c b videtur per
a / sed c angulus / est maior / a / angulo / plus quam duplo
quo b c videtur [illegible] a oculo et plus quam duplo / maior
[illegible] // [illegible] radii reflexi continent angulum in c
[illegible] non sed c b videtur per c / sed si [illegible]
radii [illegible] [illegible] ad [illegible] lineae / visae / oculo
continent / angulum quo illa linea / per illo angulo videtur / [illegible]
[illegible] / [illegible] [illegible] videtur [illegible] [illegible] / oculo
d speculum planum o b radius reflexus / super a / [illegible]
[illegible] o a / radius et [illegible] quod ab a / non exeunt / [illegible]
[illegible] duo / radii [illegible] a o / b o radii exeunt
ab / o / oculo et angulum continent / o / [illegible] angulo / [illegible]
a b linea / quo a b per o / videtur quod falsum
est / [illegible] hoc [illegible] / [illegible] / a b videtur per angulo /



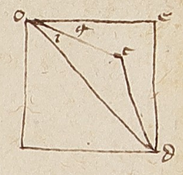
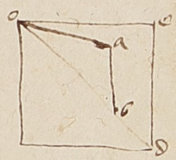
[illegible] a b videtur [illegible] oculo [illegible] a b non videtur quia ab oculo non descendit [illegible] duo radii ad a b [illegible] descendit ad hoc [illegible] radius [illegible] visibilis [illegible] radius [illegible] a b [illegible]



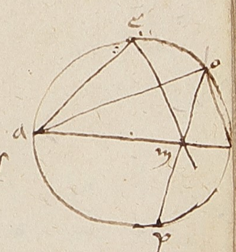
[illegible] radius [illegible] ab oculo [illegible] a b [illegible] visibilis [illegible] radius [illegible] reflexi [illegible] speculi plani [illegible] radius [illegible]



[illegible] a b [illegible] oculo [illegible] a b [illegible] oculus [illegible] videtur [illegible]

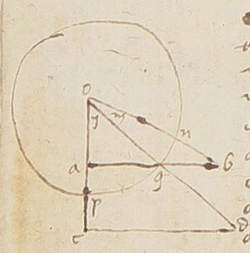
[illegible] oculo [illegible] visibilis [illegible] apparet [illegible] oculo [illegible] a b [illegible] videtur [illegible]



[illegible] a b [illegible] videtur [illegible] linea a b [illegible]

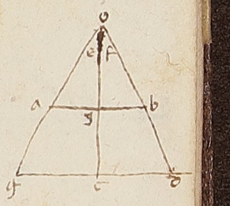
in quantitatibus continuis [illegible] inequata ab a crescere, quantitatibus inequata a b decrescere, ipsa tamen a b ut crescente ut decrescente. Contra ad hoc disputare per plexaram difficile est [illegible] quia multo difficilius est solvere quam dicere omnia [illegible]. Sed contra arguitur quod ponitur distare motus o oculus accedit ad a, ergo a videtur accedere [illegible] videtur equidistare ipsi o, ergo non videtur accedere ad o, ergo a videtur [illegible] ergo videtur minor et minor quod falsum est. Solutio [illegible] a videatur non moveri [illegible] ab a videtur accedere [illegible] oculo [illegible] a b videtur recta [illegible] a videtur [illegible] quoque videtur moveri [illegible]

[illegible]

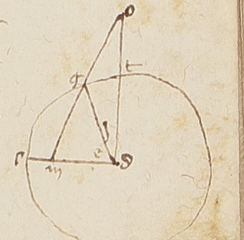


[illegible]

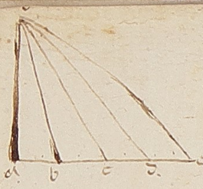
[illegible]

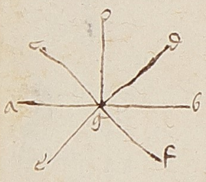


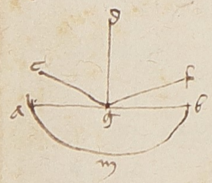
[illegible]



[illegible]



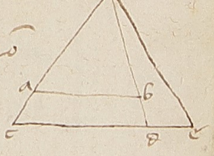


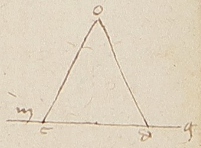


Utrum recta linea videri possit recta

[illegible]

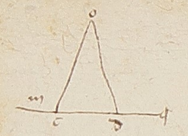
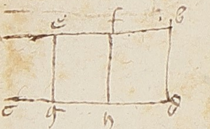
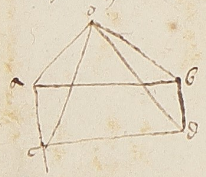
Utrum aliquae lineae videri possint equaliter distantes

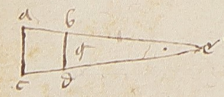




[illegible]

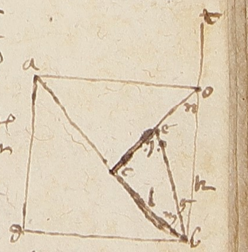
Utrum non equidistantes videri possint equidistantes



c in aqua reflectantur radii in qualibet puncto c d ita
ut c d videantur in recto c in speculo aque. Similiter sic oculo
opposita puncta videntur equidistare ab invicem in c d et c et d a c
videntur igitur a c b d videntur equidistare. Positis a c b d
in apparentia existentibus in apparentia, et hypothesis est communis. Et alio
modo videntur radii a c b d et alie linee intersecantes
visum visu procedentes, unde non videntur equidistare. Oportet
enim ad hoc ut ille linee viderentur equidistare quod et ipse
et linee intersecantes vel parum viderentur radiis perpendicularibus
vel parum videntur radiis reflexis. Item sit oculus
elevatus in aere, a b c d linee non equidistantes e g f h b d
equidistantes, e g brevior quam f h, f h non brevior quam b d
e g, propter quod est f h ipsa videretur oculo minor quam non videbatur
quam remotior esset. Similiter f h videretur minor quam nec videtur
si ipsa esset ubi b d est. Patet igitur talis esse distantia a b et c d
linearum, et tali proportione dilatatas magis versus b d quam
a c, ut e g, f h et b d videantur equales [illegible] communis dat
remotioribus dilatationibus [illegible], [illegible] auferret [illegible]
remotio. Per hoc igitur a b c d videntur equidistare. Item [illegible]
[illegible] sint o b o d equales o a o c equales et longiores quam
o b o d et o anguli equales [illegible] igitur ~~[illegible]~~ vertices in angulos
ut duo [illegible] anguli sunt quasi simul fixi et elevantur et elevantur
vertices in angulos in o b o d et o a o c lateribus in aere b d
vero non et a c iacentibus in plano, intelligatur o a protendi
[illegible] super o b et o c super o d. Sit igitur oculus qui erat in
vertice in angulo [illegible] et ab eo ducantur o b o d o a o c
radii b d a c videretur equales quod sub angulis equalibus. Sit igitur
linea ducta ab a ad b et alia a c ad d. Ille due
videntur equidistantes et tamen non essent equidistantes. Hoc [illegible]
[illegible] Sit [illegible] oculus elevatus in aere et videantur c e b f equales
quattuor radiis demissis ab oculo ad c b e f, dimittatur
igitur oculus usque dum iaceat in o ita quod [illegible]
radii quattuor qui prius pendebant ab oculo nec exeat
ab eo ad radii puncta ex [illegible] dispone. Patet quod b f
videtur minor o oculo quam c e, quod maior angulus continetur
a b o c o e radiis quam a b o b o f radiis. Posito
sic oculo et dimittatur usque in [illegible] quod vel [illegible] b f
linea accedat ipsius c e et non videatur [illegible] o b o f
vel quod radii o b o f excrescant vel quod o c o e decrescant
et in variabatur angulus in oculo sub quo videbantur c e b f
prius equales. Item sit oculus elevatus in aere in directo [illegible]
puncto a b c d videantur [illegible] equidistare. [illegible] patet ratione

a b c d quorum [illegible], a b videntur [illegible] a c et c d
[illegible] a b, c d, et c b, c d videntur equidistare, et c b, et c d
videntur igitur c b, c d videntur equidistare quod factum est quod videntur
[illegible] [illegible]. Solutio [illegible] c b, c d videntur recte
que facta esset quod [illegible] [illegible] ~~[illegible]~~ [illegible]
[illegible] ~~[illegible]~~ [illegible] oculo [illegible] directo quod c b [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] ducto ab oculo
perpendiculari ad c b, similiter c d videntur [illegible] unde non impedit
[illegible] c b et c d lineales videntur rectas equidistantes
aut [illegible] non videntur rectas nec equidistantes. [illegible] non quod oculo
[illegible] in directo quod c b videntur [illegible] non [illegible] in plano
[illegible] unde videntur [illegible] elevatas et [illegible] [illegible] No[illegible]
[illegible] [illegible] versus oculum unde quod c b et c d videntur [illegible]
[illegible] elevata [illegible] [illegible] et [illegible] [illegible] videntur
[illegible] quod [illegible] non videntur recte [illegible] obliquum
oculum videntur [illegible]. Item sit oculo in directo c in aere
[illegible] ~~[illegible]~~ quod a b c d videntur equidistare, similiter sic ~~c b~~
~~c d~~ oculo sic [illegible] c b c d videntur recte [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] videntur equidistare
[illegible] a b c d igitur et [illegible] videntur equidistare [illegible] videntur [illegible]
[illegible] Solutio [illegible] oculo [illegible] in directo c [illegible] quod linea
ducta ab oculo ad [illegible] perpendicularis ad superficiem [illegible]
c b, c d, a b, c d videntur equidistare quod [illegible] [illegible] hoc [illegible] post
a c et b d videntur equales sub angulis equalibus [illegible] quod [illegible]
oculo in directo c in aere perpendiculariter [illegible] et dimittatur radii
ab oculo ad a b c d [illegible] angulos [illegible]
et alia in b [illegible] [illegible] [illegible] perpendiculariter [illegible]
c b d quod [illegible] [illegible] linea ducta ab oculo ad c est
perpendicularis ad [illegible] c b d [illegible] est alia [illegible]
c b d [illegible] angulos [illegible] [illegible] oculo [illegible]
[illegible] [illegible] [illegible] duo [illegible] ab oculo usque ad c
[illegible] [illegible] [illegible] radii ductus ab oculo
usque ad a [illegible] ad c [illegible] radii ductus ad
b [illegible] ad c [illegible] a c b d videntur sub
angulis equalibus [illegible] oculo [illegible] in directo c. Posito oculo [illegible]
directo c ductis plurimis radiis ad c b, c d angulos
[illegible] super utrumque longiores radii maiorem [illegible]
angulum quam breviores [illegible] est b d videntur minor quam a c
[illegible] [illegible] [illegible] non [illegible] geometrie
[illegible] et non in [illegible] [illegible] [illegible] non
[illegible] [illegible] [illegible] [illegible] est. Item sit c d [illegible]
a b diametri c perpendicularis ad diametrum o oculo [illegible]
[illegible] c usque in c [illegible] oculo ad c b, [illegible]
a b o b et [illegible] ad c b, [illegible] [illegible] communis c b [illegible]
[illegible] a b o b [illegible] communis o b, igitur [illegible]
apparentia c b [illegible] apparentia o b, vel [illegible]
angulus [illegible] quo apparebit c b ~~[illegible]~~ [illegible] anglo[illegible]



pro quo / ymmo apparebit / o b / dicatur concludentur essent / i. vel distent /
e / c i. equos / n q anulus ꝑ 32 primi ... ex equalis ...
in anulos / concludentur autem essent / q / vel distent / m / sed ...
... essent ...
concludentur essent / ... c b / vel distent / ... a o b ...
... oculo existente ... / ... directo ... non oculo ...
ad c videbitur fere directo ... equalitatis ... recti ... c b
videbitur duplo maior fere ... videbitur ... o b / autem
... equalitatis ... sexagesima ad i c b
... o b non distent / ad plus ... sexagesima ...
... c b ... distent / o b / maior ... dupla ... maior
sexagesima // posito concludentur essent c b / distent o b / ...
[illegible]

[illegible]

Soto

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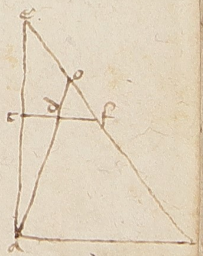
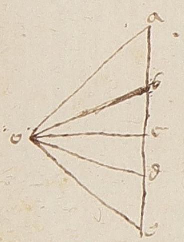
distent / ad ... demonstrata ... equalis ... non maior
... distent / ... non maior ... recta ... distent ad
... recti ... non ... ad o ...
[illegible]



[illegible]

// 9 / o / angulus est maior / c / angulo / ergo maior apparet a b oculo o / quam oculo c // solutio a b / apparet oculo o / equalis minor oculo c / equalis maior et in a b / apparet maior oculo / o / quam c oculo est [illegible] aliud minus .f. d f videtur maior oculo / o / quam maior [illegible] c f / videtur oculo c // probatio est quia oculo c / videtur c f dupla ad d f / sed per [illegible] ergo probatio videtur dupla ad a b / oculo c / non videtur c f dupla ad a b / sed minus quam dupla / ergo oculo c / videtur a b / maior quam oculo / o / non [illegible] / [illegible] / [illegible] c videtur oculo / o / tanta quanta ipsa videtur oculo c / quod falsum est / [illegible] / o / oculo a c linea [illegible] / [illegible] angulos / sub quo videtur a c equalis / angulo sub quo / videtur c e / et utrumque illorum sit dimidius in oculo [illegible] equalis alterius [illegible] linea o b / reliquus [illegible] o d ita ut [illegible] o [illegible] angulos [illegible] equales / [illegible] a c ut duplo / maior quam c e / [illegible] videtur [illegible] ut c e / ergo [illegible] duplo maior [illegible] ergo videtur duplo altior



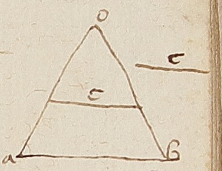
quam altera / videtur c e / [illegible] altera videtur c d [illegible] utraque videtur [illegible] altera ut c [illegible] ergo a c videtur duplo altior [illegible] c d [illegible] b d videtur [illegible] ut d [illegible] / b d videtur duplo longior quam c d ergo [illegible] videtur [illegible] maior [illegible] [illegible] ergo b d videtur duplo altior quam c d [illegible] b d [illegible] b c videtur equalis / ergo b c / videtur duplo altior quam c d [illegible] quam a c videtur [illegible] altior quam c d / ergo a c / b c videtur equales / ergo a [illegible] b videtur equalis / [illegible] est satis elegans / [illegible] quod [illegible] sunt [illegible] / [illegible] videtur / [illegible] [illegible] a [illegible] sunt equales // solutio [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] quod a c . c e [illegible] remote [illegible] / quod utraque [illegible] est [illegible] / [illegible] quod a c . c e [illegible] altior [illegible] [illegible] non [illegible] quod a c [illegible] / longior [illegible] altior [illegible] remotior [illegible] ita [illegible] obiecto // [illegible] non [illegible] [illegible] / obiectum [illegible] / [illegible] quod [illegible] / [illegible] altior [illegible] / ita [illegible] altior [illegible] videtur [illegible] // solutio [illegible] hoc [illegible] falsa c e c d [illegible] equales / quod non [illegible] altera [illegible] / [illegible] hoc [illegible] [illegible] / altior / [illegible] [illegible] ad [illegible] [illegible] [illegible] hoc argumentum non [illegible] a c est [illegible] ad c e / [illegible] [illegible] ergo est [illegible] altior [illegible] [illegible] [illegible] linea videtur tanta quanta ipsa est ad quod

Castro

utrum aliqua linea videatur tanta quanta ipsa est

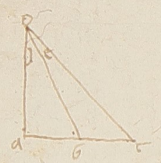
11

. sit a b videtur a b o oculo ~~[illegible]~~ aliquanta tanta est aliqua linea / quanta a b videtur sit quod c tanta / c [illegible] videtur [illegible] o / angulo / est sub c / est maior quam a b / [illegible] ergo c [illegible] a b / [illegible] / [illegible] [illegible] [illegible] [illegible] [illegible] non / c / est [illegible] a b [illegible] c / [illegible] a b [illegible] [illegible] [illegible] o oculo videtur / sit ergo c [illegible] a b [illegible] videtur tanta quanta / a b videtur / a b videtur tanta quanta c / est / ergo c [illegible] tanta quanta ipsa est / sit ergo / aliqua linea / [illegible] videtur tanta quanta ipsa est / ergo [illegible] / [illegible] [illegible] [illegible] linea videtur quanta non [illegible] ~~[illegible]~~ [illegible] est [illegible] / [illegible] [illegible] [illegible] ergo [illegible] / [illegible] [illegible] linea possit videri [illegible] [illegible] / [illegible] ergo / sub quolibet angulo / aliqua linea posset videri tanta quanta ipsa est / [illegible] / [illegible] est de angulo / o / [illegible] [illegible] [illegible] angulo ~~[illegible]~~ [illegible] ergo [illegible] ~~[illegible]~~ ~~[illegible]~~ [illegible] ~~[illegible]~~ linea / possit videri tanta quanta ipsa est non est [illegible] / [illegible] [illegible] [illegible] quam [illegible] ergo [illegible] [illegible] videtur tanta quanta ipsa est / [illegible] [illegible] // [illegible] [illegible] [illegible] linea aliqua [illegible] [illegible] oculo / [illegible] [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible] ergo / linea [illegible] / [illegible] ipsa videtur maior ipsa sit / [illegible] [illegible] [illegible] [illegible] [illegible] quam [illegible] ipsa videtur tanta quanta ipsa est / [illegible] videtur minor quam sit [illegible] [illegible] [illegible] [illegible] ipsa videtur tanta quanta ipsa est // [illegible] [illegible] linea [illegible] videtur sub quolibet angulo / [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] linea [illegible] [illegible] [illegible] [illegible] [illegible] tanta quanta ipsa est / [illegible] [illegible] a b / [illegible] tanta quanta ipsa est / [illegible] o / angulo [illegible] [illegible] c d dupla ad ab . c d [illegible] videtur tanta quanta ipsa est / oculo [illegible] / [illegible] ergo oculo / [illegible] [illegible] [illegible] / c d [illegible] / tanta quanta ipsa [illegible] a b [illegible] c d videtur [illegible] maior quam a b / videtur ergo [illegible] [illegible] maior angulo [illegible] [illegible] / est [illegible] / ad / o / [illegible] / o / est [illegible] / ergo [illegible] angulus / est [illegible] [illegible] [illegible] // solutio . [illegible] a b / [illegible] [illegible] [illegible] videtur sub angulo recto / tanta quanta ipsa est / [illegible] [illegible] ad a b / [illegible] c d [illegible] maior [illegible] non [illegible] ~~[illegible]~~ tanta quanta ipsa est / [illegible] quanta [illegible] [illegible] [illegible] quantitas [illegible] c d [illegible] videtur tanta quanta ipsa est / [illegible] [illegible] c d non [illegible] ~~[illegible]~~ [illegible] [illegible] possit videri tanta quanta ipsa [illegible] [illegible] [illegible] [illegible] est maxima [illegible] quantitas linea [illegible] [illegible] remota / [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] / [illegible] non [illegible] [illegible] / [illegible] / [illegible] [illegible] [illegible] quod [illegible] [illegible] quolibet angulo possit videri aliqua linea

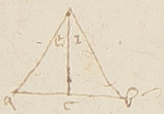


quantitatis

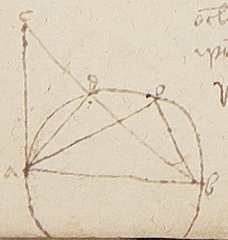
Quod non possunt videri quantitates [illegible] tanta quanta ipsa est, et [illegible] videtur [illegible] tanta quanta ipsa [illegible] a c [illegible] ab, bc [illegible] aequales [illegible] maior [illegible] bc ad ab [illegible] bc est aequalis ab [illegible] tanta quanta ipsa est bc [illegible] ab [illegible] videtur [illegible] tanta quanta ipsa est [illegible]



[illegible] videtur tanta quanta ipsa est [illegible] aequales [illegible] ab, bc [illegible] videtur tanta quanta ipsa est [illegible] tanta quanta ipsa est [illegible]



[illegible] ac [illegible] cb [illegible] tanta quanta ipsa est [illegible] ab [illegible] tanta quanta ipsa est [illegible] ac [illegible] videtur tanta quanta ipsa est [illegible] ab [illegible] tanta quanta ipsa est [illegible]



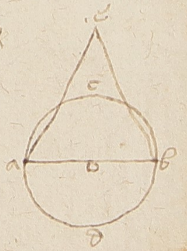
Ut in [illegible] possit videri tanta quanta ipsa est aliquis [illegible] situs habentibus

Ut in [illegible] aliquo casu videatur tanta quanta ipsa est

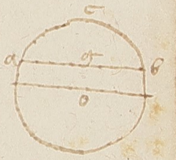
ipsa est, ab oculo [illegible] a [illegible] ab oculo [illegible] ab [illegible] tanta quanta ipsa est [illegible] aequales [illegible] a o b [illegible] o c d [illegible] ab [illegible] aequales [illegible] tanta quanta ipsa est [illegible]

[illegible] videtur tanta quanta ipsa est [illegible] tanta quanta ipsa est [illegible]

[illegible] tanta quanta ipsa est [illegible] a b [illegible] tanta quanta ipsa est [illegible] ab [illegible] tanta quanta ipsa est [illegible] videtur tanta quanta ipsa est [illegible] a c [illegible] a b [illegible]



[illegible]

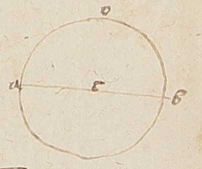

c
a
b

[illegible]

[illegible]

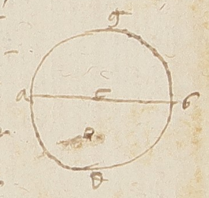
Vt^m q^a linea videat^r diametr' alicui^s circuli oculo situ i[n] circu[m]ferentia

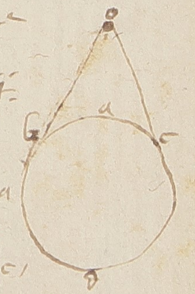
[illegible]



in medio circumferentie / sicut esset si oculo o adiaceret ad c,
quam ad a b, puncta videbuntur que magis distant inter a et b
videbuntur distare quam oculo quando videbat a o b, maior circumferentia
[illegible] ... ad [illegible] ...
ita ut cum oculo fuerit in c, tunc videbitur esse circumferentia / perfecte
est ad oppositum / et fuit a d b c / diameter dividens atque
in quatuor quartas / et si oculo movetur per g c lineam
usque in c / c oculo in [illegible] usque in g / unde si fuerit o
oculo / si [illegible] distat / sed a b quo ad oppositum c d [illegible]
[illegible] si adiacet / ad c d [illegible] / ab a b, [illegible]
[illegible] oppositum a b / et accessus / augetur oppositum
c d quam [illegible] distat / a b [illegible] accessum c d / et [illegible]
a c b d quarte [illegible] / si oculo si fuerit / [illegible] videbitur
per duos [illegible] quam per duos arcus / quam plus [illegible]
[illegible] quarte / [illegible] a c, c d, b d, [illegible] distat quarta a b quam
[illegible] accessum / [illegible]
videbitur / [illegible] adoppositum [illegible]
[illegible] / non est [illegible] / [illegible]
[illegible] oculo [illegible] / in c / tunc videbitur oculo
[illegible] / c d / [illegible] / non est / sed d b / et tunc videbitur
a b [illegible] / non videbitur c d [illegible]
[illegible] / [illegible]
[illegible] c d [illegible] a b [illegible]
[illegible] / [illegible]
plus [illegible] a b quam [illegible] / c d [illegible] /
[illegible] / tunc [illegible] a b [illegible] in duplo / [illegible] / videbitur
per duos [illegible] per duos [illegible] / [illegible] / tunc per
[illegible] c d [illegible] / in duplo [illegible]
[illegible] c d / videbitur duplo maior [illegible]
[illegible] / esset in alio / [illegible] a b, non [illegible]
[illegible] plus / distat a b / quam distat c d
[illegible] non [illegible] c d plus accessum quam distat
a b / [illegible] linea [illegible] / [illegible]
videbitur [illegible] / [illegible] quam [illegible] non [illegible] oculo
[illegible] videbitur duplo vel plus / [illegible] maior
per oculo [illegible] / movetur [illegible]
[illegible] in oculo [illegible]
[illegible] videbitur [illegible] per quarta [illegible]
videbitur per duos [illegible] per [illegible] / [illegible]
[illegible] non videbitur [illegible] per [illegible] / [illegible]
[illegible] / [illegible] oppositum

[illegible] / per oppositum [illegible]
[illegible] aliqua linea [illegible] appropinquaret oculo
[illegible] / non videbatur / [illegible] oculo non fuerit in illa / [illegible] esse
[illegible] linea [illegible] oculo [illegible]
[illegible] / videbatur [illegible] duas lineas [illegible]
esse oculo [illegible]
[illegible] / [illegible]
[illegible] / [illegible] posito [illegible]
esse [illegible] / [illegible] oculo non [illegible]
[illegible] / [illegible] oculo non videbitur / [illegible] o
oculo, [illegible] / ex diametro a b [illegible]
[illegible] esse una linea [illegible] a et b [illegible] /
[illegible] / ab a b, diameter / in a, [illegible]
[illegible] / in b et a / [illegible] videbatur esse [illegible] / ab a b
in b, [illegible] / cum a b / in a [illegible] / [illegible] videbitur
esse linea una / [illegible] / ex [illegible] non esse
una linea / unde si movetur oculo ad c / [illegible]
[illegible] / distat [illegible] a et b / [illegible]
[illegible] / per quod videbitur a et b / [illegible] linee
[illegible] / [illegible] ex diametro et a d b [illegible]
[illegible] distat / [illegible] videbitur per [illegible] / [illegible]
[illegible] / [illegible] linea [illegible] videbitur [illegible]
[illegible] videbitur per [illegible] posito oculo [illegible] / in d non
videbitur [illegible] linea / [illegible] ex [illegible] / [illegible]
[illegible] diametro a b, [illegible] et a et b,
a et b non [illegible] / [illegible]
videbuntur [illegible] ut a et b et a c b / [illegible]
videbitur [illegible] / [illegible] linee videbitur
[illegible] videbitur [illegible]
ad utrumque [illegible] dupla / [illegible]
[illegible] oculo / [illegible] o b o c [illegible] b a c
[illegible] videbitur [illegible] b d c / [illegible]
[illegible] / [illegible] / posito [illegible]
b a c [illegible] / b d c esse non videbitur b d c / [illegible]
[illegible] / non videbitur / o / oculo [illegible] aliquid videbitur [illegible] / ex
[illegible] / [illegible] non videbitur [illegible] b / d c /
b a c / videbuntur esse in eadem linea [illegible] / et ita non [illegible]
aliquid ex [illegible] / [illegible] videbuntur esse
[illegible] linea [illegible] / [illegible] / [illegible]



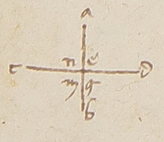


Visum oculo distante lateraliter [illegible] videtur circularis figure

~~[illegible]~~ nisi hoc / per obiectum sit quod ob / oc radii non sunt
contingentes circulum sed secantes / et sic patet quare tota b d c
arcus / maior pro angulo / et quod videtur quod ad illum oculus [illegible] ducatur radii
anguli in oculo continentes — solutio non concludit b d c videtur pro angulo
et [illegible] / o b o c / radii sunt [illegible] / o c o m / contingentes [illegible]
pro [illegible] angulo [illegible] concludit c d m / quod radii contingentes includunt
[illegible] duos pro [illegible] angulo videtur [illegible] quod o b o c / non includunt
[illegible] arcum b d c / non d o [illegible] arcum pro [illegible] / [illegible] angulo videtur

Questio

Queritur utrum in oculo existente [illegible] [illegible] videtur circularis
figura [illegible] per [illegible] / [illegible] patet quod si oculo sit [illegible] / arcus
videtur [illegible] / si [illegible] arcus videtur recta [illegible] [illegible] arcus /
[illegible] linea recta [illegible] quarta arcus videtur linea recta [illegible]
videtur [illegible] recta [illegible] quarta angulos [illegible] linea [illegible]
[illegible] pro [illegible] quod [illegible] linea [illegible] angulos / [illegible]
quod [illegible] / [illegible] videtur [illegible] superficie [illegible] videtur
recta linea / [illegible] videtur [illegible] angulos
[illegible] [illegible] quod oculo non [illegible] [illegible] angulos
[illegible] [illegible] / [illegible] videtur [illegible] angulos / [illegible]
[illegible] videtur recta linea / [illegible] / [illegible] oculo [illegible]
[illegible] videtur [illegible] [illegible] arcum non [illegible] / [illegible]
non [illegible] / [illegible] videtur magis [illegible] / [illegible]
[illegible] [illegible] ad [illegible] videtur [illegible] / [illegible] et [illegible]
[illegible] [illegible] videtur angulus [illegible] / [illegible] angulos [illegible]
arcum videtur [illegible] / [illegible] arcum [illegible]
angulo / [illegible] / [illegible] [illegible] [illegible] [illegible]
arcus [illegible] [illegible] arcus / [illegible] [illegible] [illegible]
arcus videtur linea recta quod non [illegible] arcus / videtur
recta / oculo [illegible] / [illegible] duo linee [illegible] oculo
videtur equalis in hoc [illegible] non quod [illegible] [illegible]
hoc [illegible] videtur complete [illegible] [illegible] [illegible]
duo [illegible] [illegible] [illegible] circulos [illegible] [illegible]
per [illegible] / [illegible] / [illegible] arcus [illegible] oculo
oculi sunt [illegible] / [illegible] videtur equalis quod [illegible] pro quarta
[illegible] / [illegible] oculo [illegible] arcus / [illegible]
[illegible] pro [illegible] / [illegible] complete [illegible] [illegible]
[illegible] per angulo / [illegible] / [illegible] videtur [illegible] oculo
linee / [illegible]

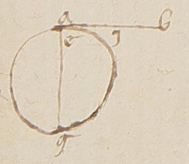


[illegible] ab c d [illegible] ad quartam [illegible] per oculo [illegible]
in arcu [illegible] [illegible] / [illegible] per a b c d linee videtur
[illegible] ad quartam ~~[illegible]~~ angulos equales [illegible]

~~[illegible]~~ [illegible] [illegible] quod [illegible] videtur ~~[illegible]~~ [illegible]
[illegible] ac videtur [illegible] / [illegible] c d et non videtur magis [illegible]
[illegible] / c [illegible] / d / quod non [illegible] magis [illegible] [illegible]
[illegible] quod [illegible] / quod ac / [illegible] videtur [illegible] / [illegible] / c d
linee quod n c angulus videtur [illegible] / elongetur oculo [illegible]
[illegible] / [illegible] linea recta [illegible] per [illegible]
[illegible] / [illegible] / adhuc [illegible] / [illegible] angulos videtur
rectos / [illegible] / [illegible] lineam [illegible] oculi [illegible]
complete elongetur [illegible] quartam angulus [illegible] / quo
ad [illegible] [illegible] non [illegible] non aliquorum [illegible]
non [illegible] aliquorum videtur [illegible] oculi // [illegible]
[illegible] / [illegible] quod [illegible] [illegible] quod [illegible] [illegible] / patet
[illegible] videtur / [illegible] ~~[illegible]~~ [illegible] pro oculo [illegible] quod non videtur
angulos / si quod [illegible] [illegible] quo ad [illegible]
angulos / [illegible] [illegible] [illegible] [illegible] / [illegible] linea
[illegible] [illegible] per [illegible] / ad ab c d lineas / [illegible]
[illegible] [illegible] [illegible] / ab c d [illegible]
videtur [illegible] / [illegible] c d videtur [illegible] videtur
[illegible] / [illegible] / [illegible] magis [illegible] quod [illegible]
quarta angulus videtur [illegible] / [illegible] / [illegible] equales
quod videtur [illegible] quod [illegible] ~~[illegible]~~
quod si aliquorum anguli [illegible] [illegible] angulus [illegible]
[illegible] [illegible] quarta [illegible] / [illegible] linee
videtur ~~[illegible]~~ [illegible] [illegible] / [illegible] n c [illegible]
angulos videtur [illegible] / [illegible] / [illegible] illos
videtur rectos [illegible] / [illegible] / [illegible]
a b c d videtur recte quod si [illegible] [illegible] angulos videtur
[illegible] / [illegible] / [illegible] / per oculo [illegible]
~~[illegible]~~ arcus [illegible] b / [illegible] / [illegible] / [illegible] / per
[illegible] oculo [illegible] quod [illegible] rectos [illegible] quod videtur
equales [illegible] 6 a videtur recta quod linea [illegible] ab [illegible]
ad b / [illegible] / ad b a / [illegible] c n / videtur equales
[illegible] [illegible] oculi [illegible] c d ad a b
quod n c angulus videtur recta [illegible] / si oculo [illegible]
[illegible] complete magis [illegible] [illegible] b /
[illegible] n c [illegible] angulos videtur rectos / [illegible]
oculo [illegible] [illegible] / [illegible] [illegible]
quod per [illegible] / a b c n videtur recta [illegible]
quod radii [illegible] ad ~~[illegible]~~ [illegible] / [illegible] [illegible] ad
[illegible] / [illegible] / n / ~~[illegible]~~ angulus [illegible] c n videtur [illegible]
duos rectos [illegible] videtur [illegible] [illegible] obliquos /

[illegible]

Cor^m oppinionis



[illegible]

Incipit secundus tractatus qui de angulis ubi plurima et singularia de eo tangit

[illegible]

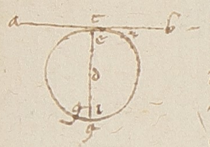
Tractatus 2

Diffi^o anguli

Diuisio

[illegible]

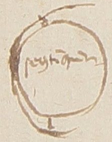
f 19 3a



q[uod] [illegible] et [illegible] no[n] secat / [illegible] est [illegible]
[illegible] diameter [illegible] perpendicularis / diameter [illegible]
circuli [illegible] / [illegible] ab [illegible] perpendicularis ad c [illegible] diameter
a b [illegible] circuli et no[n] secat [illegible] / est [illegible]
[illegible] angulus [illegible] recta [illegible] / [illegible]
[illegible] / [illegible] et [illegible]
angulus / est [illegible] rectilineus [illegible] rectilineus

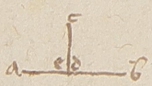
[illegible] / [illegible] recta linea [illegible] autem . i. angulus
angulus [illegible] / [illegible] autem angulus rectilineus [illegible]
[illegible] per 14 3a [illegible] rectilineus angulus / [illegible]
[illegible] c d linee / [illegible] / [illegible]
[illegible] et [illegible] / [illegible]
recta et [illegible] / [illegible] angulus
[illegible] angulus / [illegible] ad nos / [illegible]

[illegible] / [illegible] et angulus / [illegible]
[illegible] / [illegible]
[illegible] c d [illegible] et [illegible]
linea [illegible] / [illegible] / [illegible] est



f / [illegible] ad nos / [illegible] / [illegible]
angulus [illegible] / [illegible] angulus [illegible]
[illegible] est [illegible] / [illegible] angulus [illegible]
[illegible] angulus obtusus / [illegible] est [illegible]
[illegible] . a. [illegible] / [illegible] . a. [illegible]
/ est [illegible] / [illegible] no[n] [illegible]
[illegible] est angulus / obtusus / [illegible] / [illegible]

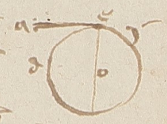
angulus no[n] [illegible] / [illegible] angulus
[illegible] / [illegible] angulus
[illegible] angulus [illegible] / [illegible]
et [illegible] / ~~angulo~~ [illegible] angulo [illegible]
[illegible] / [illegible]
hoc autem est ex [illegible] / [illegible] est /
[illegible] autem [illegible] hoc esse [illegible] linee
[illegible] / [illegible] / ad [illegible]



[illegible] / [illegible] c d [illegible] / ad a b c [illegible]
[illegible] / [illegible] d . est angulus
[illegible] d / [illegible] c / [illegible] angulus ex
[illegible] c / est angulus [illegible] ex d [illegible] c est
angulus no[n] [illegible] / [illegible] ex d [illegible] c est
[illegible] / [illegible]

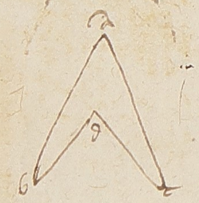
~~ex~~ ex duob[us] [illegible] / [illegible] angulus [illegible] hoc est
a c d b / directe [illegible] / directe [illegible] / [illegible] est
[illegible] / [illegible]
[illegible] / [illegible] directe [illegible] ex [illegible] linea
[illegible] directe [illegible] directe
[illegible] no[n] [illegible] / ne ex duob[us] angulis / [illegible]
[illegible] ~~[illegible]~~ [illegible] / [illegible] directe no[n] [illegible] / [illegible]
g f / obtusus [illegible] k f g p [illegible] directe no[n]
[illegible] ex f [illegible] et est aliquid / [illegible] k p
g p / directe [illegible] ex g [illegible] f [illegible] angulus /
[illegible] angulus ~~[illegible]~~ k f g p / directe
[illegible] ~~ex g f [illegible] angulus~~ / [illegible]
[illegible] g / [illegible] angulus [illegible]
[illegible] / linee autem [illegible]

[illegible] / [illegible] recta [illegible]
[illegible] / [illegible]
et [illegible] / [illegible] / [illegible]
[illegible] angulus / [illegible]
[illegible] / [illegible] Quaeritur [illegible] / [illegible] Questio
[illegible] / [illegible] peripheria [illegible] alia [illegible]
[illegible] / [illegible] a c [illegible] circuli / [illegible]



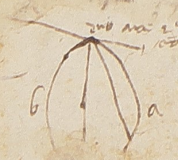
[illegible] a c [illegible] / [illegible] c / [illegible]
[illegible] no[n] [illegible] / [illegible] angulus obtusus / est [illegible]
[illegible] / ad c / [illegible]
[illegible] / [illegible]
d c a angulus [illegible] c / [illegible] a c [illegible] no[n] [illegible] / angulus
[illegible] obtusus [illegible]
[illegible] recta [illegible] angulus [illegible]
[illegible] / [illegible] / [illegible] recta / alia
[illegible] / [illegible]
[illegible] no[n] est angulus / [illegible]
[illegible] a c directe [illegible] c . Inpp[ositi]o
[illegible] angulus [illegible] a c [illegible] linea
est [illegible] / [illegible]
directe / [illegible] / a c linee est [illegible]
c [illegible] / [illegible] c / [illegible] /
aliquid [illegible] / [illegible] ab a ad a [illegible] c [illegible]

Solutio



quasi ascenderet quam illud infra descenderet quo ubi inveniret [illegible] quo ibi est angulus / Solutio angulum generat, et sic angulus generatur, est quasi rectilineus minor [illegible] rectilineo maior [illegible] solutio [illegible] rectilineus, est duplus vel maior quam 2us, ad angulum [illegible] est plus quam [illegible] ad 3m dicendum quod non est [illegible] spera [illegible] hoc autem non est [illegible] aliqua superficies [illegible] rectilinea, et tamen habet 3s angulos, quod est [illegible] figura quod est [illegible] a b c d est superficies [illegible] tres angulos [illegible] d angulus, qui generatur b d c d non est [illegible] superficies a b c d quod est figura [illegible] / Solutio [illegible] argumentum non [illegible] figura 2a figura [illegible] 3s angulos rectilineos non [illegible]

[illegible]



vt' mi retisint eglos

[illegible]

[illegible]

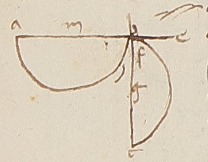
Instantia

[illegible]

Nota

[illegible]

Instantia



[illegible]

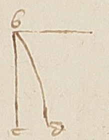
Solutio

[illegible]

Contra

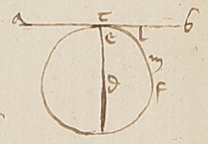
[illegible]

[illegible]



[illegible]

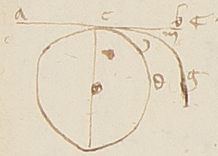
Triangulo signantur



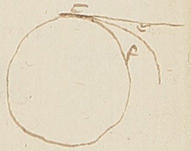
[illegible]

Sit ergo sic: sit [illegible] primo ab continens medietatem ac et eius
quartam et octavam et sic deinceps in infinitum. Improbatio: sumatur
multiplex ad cb, primo duplum, postea triplum et sic
in infinitum quousque occurrat aliqua linea multiplex ad cb que
sit maior quam ac, et sit illa [illegible] d, et sit [illegible]. placet quod
in [illegible] una maior d quam octupla ad cb, d est maior
quam ac; ergo octava pars d [illegible] cb est maior quam octava
ac; ergo ab in se [illegible] nihil continet de una octava
ac quia illa octava tota est in bc; ergo ab non continet
medietatem ac, et quartam et octavam et sic deinceps
in infinitum [illegible] non continet medietatem
ac et eius quartam et octavam [illegible]. Hic loquitur propositio
de [illegible] superficiebus corporibus et aliis continuis
= Contra [illegible] ad idem [illegible] est pars c
ergo non continet eius medietatem et quartam et sic deinceps. Item
si c dividatur in duos [illegible] lineas dividens secabit
c; ergo c continet [illegible] medietatem c. = Item [illegible]
c in duos [illegible] dividas lineas dividens secabit c; ergo c
continet [illegible] quartam [illegible] quod continet
octavam et sic deinceps in infinitum [illegible] dividere
c [illegible] lineas rectas, et [illegible] est omnes
illas [illegible] verum est quod c continet medietatem
et quartam in infinitum partes sic proportionales. demonstro
aut ad [illegible] in lineis, superficiebus corporibus
[illegible] motibus ponderibus locis in angulis in rectilineis
non falsitas sed hoc non dico quod falsitas, sed locus non habet
applicationem ad hos angulos, [illegible]
[illegible] in infinitum [illegible] sumendo
angulum multiplicem ad a [illegible] aliquem angulum
multiplicem ad a qui sit maior [illegible]
maior aliquo rectilineo angulo [illegible] hoc quod a est [illegible]
[illegible] rectilineos [illegible]
est [illegible] aliqua sit proportio c ad a quia sic [illegible]
videtur [illegible] c est pars c [illegible] ad [illegible]
ergo c ad c aliqua est proportio. Item c est plus quam equalis
c quia est maior et est minus quam duplus ad c; ergo c
se habet ad c in aliqua proportione que est inter equalitatem et duplam
= Item aliquis est [illegible] excessus quo c superat c; ergo
aliqua est certa [illegible] maior [illegible]

ergo aliqua proportio, contra adversarium. = Item c est sicut
equalis c, ergo c habet se ad c sicut [illegible] proportione
ergo aliqua que est sicut equalitas, ergo aliqua. Sed hoc [illegible]
[illegible] c ad c se habet in aliqua proportione, et est c [illegible]
est aliqua proportio, ergo [illegible] b a. = [illegible]
[illegible] quod infinitum ad finitum nulla est proportio, sed c est
infinitum ad a; ergo nulla est proportio c ad a. = Item infinite
excedit, [illegible] est communis [illegible]
ergo non est [illegible] excessum
= Item omnis proportio [illegible] quia non est [illegible]
est in lineis rectis; ergo si aliqua proportio est c ad a
[illegible] est in lineis rectis, sed nulla recta habet [illegible]
[illegible] rectas aliis rectis proportionales [illegible]
ergo nulla linea recta ad aliam se habet [illegible] c ad a.
Item [illegible] quod c non se habet ad a in aliqua
proportione, quod sit multiplex dupla, nec in dupla, nec in tripla
nec aliqua que sit inter duplam et triplam, sed nec quadrupla
nec aliqua que sit inter triplam et quadruplam et sic in
infinitum; ergo nulla, quia omnis proportio [illegible] quia non
est [illegible] aut est aliqua multiplicium aut inter
aliquas multiplices. [illegible] est ad
hanc partem, sed [illegible]
ad aliam partem [illegible]
[illegible] ad utramque partem [illegible]
[illegible]
[illegible] difficile [illegible] videtur quod
nulla est proportio c ad c vel c ad a [illegible] ergo [illegible]
[illegible] falsa est [illegible]
[illegible] ad c [illegible] infinitum ad a [illegible]
nulla est [illegible] proportio c ad a [illegible]
nulla est proportio c ad c [illegible]
[illegible] non [illegible] ab [illegible]
[illegible] et aliqua que est proportio c ad c [illegible]
[illegible]
[illegible] excessus [illegible] est
[illegible] = Item ad [illegible]
hoc [illegible] est ex [illegible]
c sicut c equalis proportione, sed [illegible] hoc [illegible]
[illegible] falsa est [illegible]

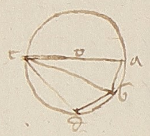


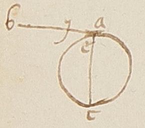
[illegible]

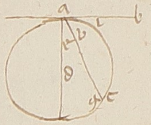


De proportione anguli et motu circ.

[illegible]







[illegible] ... quod ... movetur ... a ... ad d ... circulus ... [illegible]

[illegible]

[illegible] ... in instanti ... [illegible]

[illegible]

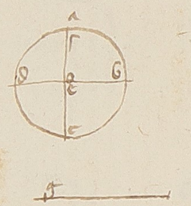
[illegible] ... instans ... linea ... a b ... [illegible]

[illegible]

[illegible] ... linea ... ad hoc ... [illegible]

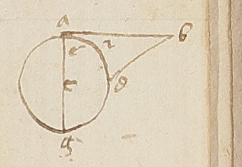
[illegible]

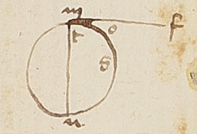
ac continue i. velocior posito contrario experientie
cum patebit quod anulus



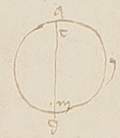
¶ Arguitur a b conficiat circulo non moto, o anulus
movetur per o centrum ubi c est, moveatur g, punctum
linearis [illegible] ut o anulus completum punctum ac linee
post o, notetur (p. doctrine) b quolibet s. o movetur tardius
quam quolibet b g movetur tardius sed quolibet s. aliud
s. duplo movetur tardius quam duplo circulo propinquius quam
quolibet s. g movetur duplo tardius quam b motu suo
describit circumferentiam et g describit lineam rectam quia illa
recta est duplo minor qualibet tali circumferentia quia
illa recta est infinitum parva vel non qualibet tali circum-
ferentia [illegible] est duplo minor, posito [illegible] est aliquod
punctum motum [illegible] tardius ut anulus o continue anulus
o non movetur aliquantum remisse quam duplo remissius
ut est ~~[illegible]~~ dicitur quod posito remisse movetur quam infinite
remisse [illegible] est in b anulus b n anulus movetur
aliquantum [illegible] et non [illegible] quam movetur [illegible] b puncto et
non [illegible] sed [illegible] movetur aliquantum tardius quam tardius
dubium esse [illegible] alius [illegible] quod motus o anuli est aliquantum
remissius et non magis [illegible] n cum esse [illegible]
remissum et tamen remisse demonstrata remissione motus
non [illegible] puncto sed [illegible] anuli [illegible] [illegible]
[illegible] quod [illegible] est [illegible] argumentum
motu [illegible] s. est motus o duplo remissior vel plus
quam duplo [illegible] b motus [illegible] b duplo remissior
quam motus o est infinite remissus non [illegible]
o [illegible] sed [illegible] cum motus b anuli
referatur ad b punctum [illegible] non [illegible] o motus
referatur ad motum o puncti ut [illegible] b anulus [illegible]
motus esse [illegible] b puncto et non [illegible] non o anulus
[illegible] motus [illegible] o puncto et non remissius vel
cum o puncti non motus [illegible] o anulus motus [illegible]
[illegible] quod o anulus describat motu suo [illegible] superficiem
quia o anulus est punctus superficie quia o anulus est
superficies vel linea [illegible] remissius [illegible]
[illegible] anuli. Differentia anguli
¶ Sit [illegible] circulo cum a b [illegible] plano

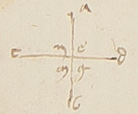
[illegible] et per oculos elevetur a [illegible] perpendiculariter [illegible]
c et super magis elevetur anulus et elongetur circulo
[illegible] visus [illegible] apparet minor et [illegible] quod videtur
magis [illegible] ad diametrum a g et [illegible] quod
c anulus [illegible] minoratur et [illegible] quod [illegible] arcus
[illegible] videtur tanto apparet minor [illegible] aliquis quod
[illegible] videtur [illegible] et a b videtur [illegible] ad [illegible]
et [illegible] est quod [illegible] non videtur [illegible]
a super videtur rectum et c videtur [illegible] quod [illegible]
[illegible] a g super videtur diametrum [illegible] a b super videtur
tangentem circuli et non [illegible] quod a b videtur [illegible]
vel a videtur [illegible] obtusus sed [illegible] non videtur
[illegible] quod a b videtur [illegible] quod perpendicularis ad diametrum
quod a videtur rectum [illegible] per n m [illegible]
quam a g et a g videtur tanta [illegible] n m [illegible] f
per [illegible] per a g [illegible] n m quod d
[illegible] videtur [illegible] s. [illegible] quod c anulus apparet [illegible]
[illegible] est [illegible] anulus [illegible] est o sed o est maior
quam [illegible] n circulo circulo [illegible] anulus [illegible] anulus
[illegible] minor quod [illegible] videtur [illegible] non
[illegible] vel [illegible] videtur in [illegible] claro aere ut
[illegible] et [illegible] videtur quod [illegible] apparet [illegible]
[illegible] recte linee [illegible] b c d [illegible] parum [illegible]
[illegible] ille linee videntur [illegible] quam [illegible] videbantur
[illegible] anulus [illegible] quod [illegible] videtur [illegible] et a b
quam [illegible] quod magis [illegible] quod [illegible] anulus [illegible] posito
[illegible] videtur maior quam [illegible] n [illegible] post
[illegible] apparet maior et [illegible] magis elongetur [illegible]
[illegible] figura corporis anulus [illegible] videtur [illegible]
[illegible] mutata et cum [illegible]
[illegible] ad [illegible] quod est [illegible] videre quod [illegible]
[illegible] paretur c [illegible] talis [illegible]
a [illegible] elongatio [illegible] oculi [illegible] [illegible] [illegible] oculos
~~[illegible]~~ [illegible] ad a [illegible] quod et [illegible]
argumentum falsum est ad [illegible] quod
[illegible] falsum est [illegible] et a b videtur [illegible]
quam [illegible] videtur parum [illegible]
lineam rectam videtur et [illegible] oculus [illegible] [illegible]





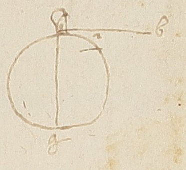
videbantur quod distare, ut videtur maius quam per omnes, scilicet recta
linea talis, et adhuc, videtur maius quam per, sed an [illegible] ad illas [illegible]
[illegible] circulus diminutus non augetur, vel minuitur angulus apparentia = sed quia
circa videtur [illegible] ab [illegible], ad [illegible] quod d videtur
[illegible] b, quod a b, a b c d, ut magis distare quam per quod linea recta
b d videtur maiorari, solutio hoc secundum argumentum non valet b, scilicet
videtur [illegible] d, non dico quod videtur dependeret versus b,
sed appropinquare versus a, quod ad minorari videtur quod
d videtur videtur versus versus, [illegible] et b versus a, et
minimum sit b d videtur differentia [illegible] propter oculo elongari
circulo quam minorari, quod non videbitur hoc, scilicet, probat enim de
in libro de fallacia visus, et si circulo non videtur nisi a.
videbitur quod oculo propter tantum adeo ab a quod a circumferentia
unde hoc [illegible] minimam computationem quod quanto magis elongari
tanto magis differt, quo ad apparentiam = solutio quanto
magis elongabitur oculo tanto, magis videbitur a. et tamen
tandem circumferentia, sed non per se, sed per accidens, quod ab ea
minuitur ad [illegible] quo ad visum = [illegible] et in anguli
forte videtur recta et a c et d c, arcus forte videtur
recte linee = [illegible], amplissima et ad rectam
videtur [illegible] illa quod a c d, forte, videtur [illegible]
[illegible] non sequitur quod [illegible] videtur [illegible]
in recto non fallit = aliquo angulo, videtur aliquis,
ab oculo existente in aliquo remoto quod possibile est [illegible] videtur
maior vel minor ab eodem oculo in eodem situ existente in maiori
distantia videtur [illegible] in orbe ~~[illegible]~~ rectilineus angulus
[illegible] scilicet sit a b c d quattuor rectos, et sit oculo
[illegible] et [illegible] adiacentem lineam, [illegible]
sit, hec linee videtur [illegible] ad angulos [illegible] quod rectos
vel sit hic [illegible] videtur [illegible] videtur [illegible]
partem [illegible], quod videtur recta ~~includens~~ spatium [illegible]
[illegible] scilicet, recta includens spatium [illegible] partem [illegible]
[illegible] apparet [illegible] elongetur oculo
[illegible] secundum lineam rectam ut [illegible]
[illegible], oportet [illegible] videbantur
recta et [illegible] magis [illegible] elongaretur
[illegible], vel differt, [illegible]
[illegible] aliquotiens, et [illegible] non aliquotiens, quod [illegible]
rectilineus angulus, [illegible] a b videtur [illegible]





c d quod a b c d videtur [illegible] et sic [illegible] videtur
[illegible] polidi et [illegible] videtur [illegible]
[illegible] polidi [illegible] videtur [illegible], et si
[illegible], [illegible] hoc argumentum non valet a [illegible] videtur
[illegible] a b videtur [illegible] circuli et non [illegible] quod videtur
[illegible] angulus recti, sit [illegible], scilicet, oculo [illegible]
[illegible] secundum premissa, et [illegible] videtur [illegible]
[illegible] oculo [illegible] a [illegible] [illegible]
circulo apparet circulo sed oblonga figura, [illegible] in hoc [illegible]
a. non videbitur [illegible] [illegible] non [illegible]
[illegible] [illegible] [illegible], ut [illegible]
[illegible] quadratis, columne et [illegible], circuli
[illegible] ~~recti~~ [illegible] videtur [illegible]
et sit oculo [illegible] [illegible] videtur [illegible]
linee [illegible] recta quod aliquo [illegible] apparet [illegible]
rectilineus [illegible] angulos rectos quod videtur [illegible]
quod in hoc [illegible] lineas [illegible] videtur [illegible]
et [illegible] probo [illegible] in libro de aspectibus,
quod oculo [illegible] existente [illegible] videtur [illegible], quod [illegible]
oculo existente [illegible] columne videtur
[illegible] columne [illegible] quod recta linea [illegible], probo
[illegible] oculo existente [illegible] columne videtur
recta vel [illegible] et videtur [illegible] ad [illegible]
~~[illegible]~~ [illegible] quod rectos, [illegible] oculo existente [illegible]
[illegible] videtur [illegible] [illegible] in [illegible]
sed non [illegible] ~~[illegible]~~ linea recta [illegible]
[illegible] et [illegible], quod [illegible]
[illegible] [illegible] [illegible] [illegible]
hoc [illegible], hoc [illegible] notarum, quod [illegible] 12. d. [illegible]
apparet, [illegible] [illegible], [illegible], [illegible] Quid sit
[illegible] [illegible] [illegible] [illegible]
[illegible] ad [illegible] angulare [illegible].
[illegible] [illegible] [illegible] [illegible]
[illegible] ~~[illegible]~~ [illegible]
[illegible], sed hoc ~~magis~~ [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible].

De magnitudine solido



[illegible]

De angulis corporeis

Quid sit angulus

De angulis ~~[illegible]~~ positionis circa diffinitionem eius

Quid sit superficies

Instantia quod non sit superficies

[illegible]

Quid sit [illegible]

Quid sit punctus

instans quod non sit punctus
Boto

superficiei [illegible] / [illegible] 3 [illegible] / [illegible] conclusione
[illegible] alius [illegible] hanc sententiam [illegible] facilis est
ubi multa dicta [illegible] rectus est maior acuto / minor
obtuso / solo modo loquendi [illegible] rectus dicitur maior acuto
non [illegible] dicitur [illegible] aliquam [illegible] et magnitudinem quod
refertur ad acutum / est [illegible] rectus acutus obtusus
sed angulus [illegible] rectus est [illegible] est rectus [illegible] lineas [illegible]
puncto quod [illegible] est [illegible] / [illegible] [illegible] est
[illegible] / omnis quod angulus equalis omnibus superficiei
quod est quod angulus [illegible] / [illegible] angulus est [illegible] /
angulus [illegible] / [illegible] / linea quod dividit superficiem [illegible]
a b angulo / procedit [illegible] / [illegible] angulus est punctus / male

linea dividit
superficies dividit
a b angulo distio procedit

[illegible] euclides [illegible] angulus [illegible] / [illegible] separati
[illegible] / [illegible] hoc euclides [illegible] duplicem
modum intelligendi / punctus [illegible] ad lineam angulus ad [illegible]
refertur / tamen [illegible] / linee [illegible] punctum [illegible] lineas
angulus / [illegible] hanc [illegible] sententie obiectio / quod est
[illegible] angulus / [illegible] / et [illegible] intelligendum est
[illegible] angulus / est superficies [illegible] in eo [illegible]
[illegible] punctus omnis [illegible] equalis sed [illegible] ad distantiam lineas
[illegible] / [illegible] concurrunt [illegible]
[illegible] / [illegible] et due recte et
et [illegible] / linea [illegible] distantie
[illegible] linea [illegible] / [illegible]
[illegible] / [illegible] / [illegible] distantie
duplo [illegible] non / [illegible] / [illegible] duplo [illegible]
[illegible] / [illegible] non [illegible] / [illegible]
[illegible] et [illegible] / [illegible] [illegible] punctum
[illegible] / [illegible] / non [illegible]
[illegible] totalis distantia / [illegible] distantia
[illegible] punctus [illegible] / [illegible] distantia est
[illegible] qualitas distantia [illegible] lineas [illegible]
[illegible] angulus est qualitas / est [illegible] / [illegible]

alia anguli distio

[illegible] non [illegible] quantitas / [illegible]
superficies [illegible] linee [illegible] superficies quod
est [illegible] / non linea [illegible] superficies [illegible]
[illegible] non [illegible] / [illegible] angulus non [illegible] / [illegible]
[illegible] / [illegible] est [illegible]

punctum non ullus angulus [illegible] superficie [illegible]

angulus rectus acutus / obtusus / hec [illegible] nota [illegible]
[illegible] equalitas non equalitas [illegible] hoc / [illegible] angulus
maior alio / vel minor vel equalis / sed obtusior acutior
acutior [illegible] / [illegible] hoc [illegible] angulus [illegible] / [illegible]
[illegible] angulus ex angulo / angulus [illegible] ex [illegible]

a d omnis angulus [illegible]

et [illegible] / [illegible] angulus est quantitas / quod [illegible] ad

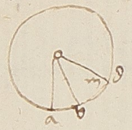
Instans

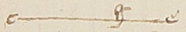
[illegible] vel [illegible] hoc [illegible] / [illegible] angulus / [illegible]
est / [illegible] angulo ex eo [illegible] talis [illegible] angulo
non [illegible] hoc angulus [illegible] / [illegible] angulus est
[illegible] / geometrie [illegible] / [illegible]
[illegible] / [illegible] angulus est
simplex [illegible] geometrica geometria / est
[illegible] disciplina / [illegible] / quod
angulus est quantitas / [illegible] non [illegible] recti
[illegible] geometrie [illegible] et [illegible] hec
nota [illegible] quantitas / [illegible] linee [illegible] / angulo
[illegible] hoc [illegible] angulus quantitas / alia [illegible] obiectio
[illegible] hanc [illegible] / [illegible] / [illegible]
[illegible] / [illegible] hanc [illegible] / angulus / [illegible]

alia [illegible] distio

[illegible] qualitas quam adveniens superficiei relata ad contactum
linearum / [illegible] angulus est in superficie [illegible]
non in [illegible] / [illegible] angulus est [illegible] quantitas [illegible]
et longitudinis [illegible] / quod est superficies / [illegible]
angulus / est [illegible] / [illegible] linee quod
[illegible] est superficies / [illegible] / [illegible] quantitas non
tota est in puncto / quod est ex [illegible] / [illegible] dicitur
[illegible] angulare [illegible] / procedit [illegible] linea [illegible]
[illegible] angulus / [illegible] angulus / [illegible]
linee / [illegible] angulo / quod [illegible] / vel excedit
[illegible] / angulus et [illegible] angulo [illegible] hoc angulus
[illegible] / quod est [illegible]
[illegible] vel [illegible] hoc [illegible]
[illegible] qualitatis [illegible] opinio [illegible] / [illegible]
[illegible] dubium [illegible]
[illegible] dubia [illegible] / [illegible] non [illegible]

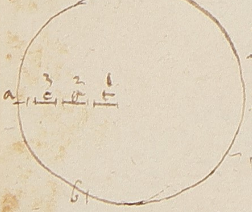
Artificium quo docetur datum angulum quemlibet [illegible] dividere



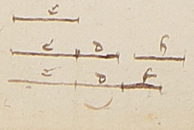


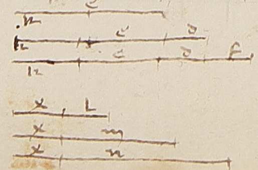
[illegible]

[illegible]

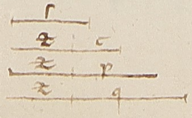


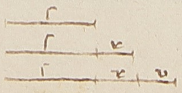
[illegible]

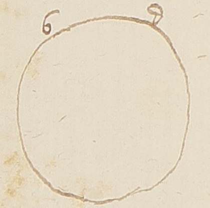


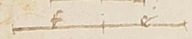


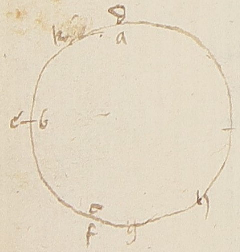
[illegible]











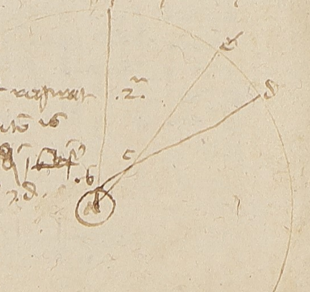
tunc est mi[nim]us [illegible] est b. quod b [illegible] maximus est / quia c et
ut k et k non [illegible] c revolutiones erit quod x absque
[illegible] in x ad x [illegible] d c ad c [illegible] k sola [illegible]
d / et f non [illegible] post integras revolutiones [illegible]
[illegible] quod movetur [illegible] cum differentia / [illegible]
[illegible] maxime [illegible] [illegible]. [illegible] autem [illegible] adiungo
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] regula est ista / [illegible] n, quod
movetur a et b, et [illegible] movetur d et c / et [illegible]
[illegible] et [illegible] d, et [illegible] [illegible] [illegible] est
[illegible] [illegible] c et f / [illegible] c / [illegible]
[illegible] c d [illegible] [illegible] a d [illegible] et [illegible]
[illegible] [illegible] b / [illegible] usque ad [illegible]
[illegible] / [illegible] autem vel plurib[us] [illegible] [illegible] possibile
est [illegible] / [illegible] [illegible] quod movetur a b c [illegible]
d k c f a g et [illegible] a i d et b i d / et c i k et [illegible] d k
[illegible] d c [illegible] d et [illegible] f et
[illegible] [illegible] [illegible] [illegible]
[illegible] b, d et c [illegible] [illegible] non
b et c / [illegible] i d vel i c / et [illegible] c
et f g / [illegible] i g [illegible] i d [illegible]
[illegible] [illegible] non [illegible] possibile
[illegible] non [illegible] possibile [illegible]
[illegible] [illegible] a b c
[illegible] a cum b, [illegible]
[illegible] b et c / [illegible]
[illegible] f [illegible] k [illegible] maxima
[illegible] d c f [illegible] [illegible] g b l
[illegible] g b et f [illegible] [illegible]
[illegible] f / [illegible] d et g [illegible]
[illegible] [illegible] [illegible] / [illegible]
k [illegible] c / et [illegible] f vel [illegible] erit
quod k et [illegible] a cum b, et b cum
c / [illegible] [illegible]
b et c [illegible] maxime [illegible] / [illegible] / [illegible]
possibile erit [illegible] [illegible] [illegible]

[illegible] addatur / [illegible] [illegible] [illegible] [illegible] [illegible] b g
[illegible] [illegible] addatur / g / [illegible] b et c
non [illegible] / g / k non erit possibile / g non esse differentias
multiplicium b et c / [illegible] n, differentia / b et c [illegible] multiplicia
[illegible] [illegible] [illegible] differentias [illegible] non erit
[illegible] a et b et c [illegible] n, [illegible] [illegible] [illegible]
[illegible] a cum b, et b cum c / [illegible] non [illegible] [illegible]
[illegible] est [illegible] [illegible] addendo [illegible] usque ad [illegible]
[illegible] [illegible] ab ab c, et f, [illegible] differentias esse
d et g esse non possunt, non [illegible] / [illegible] autem [illegible] non
[illegible] / g movetur [illegible] a b c d [illegible] / [illegible]
a b c / [illegible] [illegible] [illegible] [illegible] c et d
et [illegible] [illegible] / [illegible] [illegible] [illegible]
a b c usque ad [illegible] [illegible] [illegible]
[illegible] c et d et [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] quod movetur [illegible]
[illegible] a b c [illegible] [illegible] c d [illegible]
[illegible] ab a [illegible] b, ad c [illegible] [illegible] [illegible]
b et c [illegible] [illegible] [illegible] [illegible]
i b [illegible] [illegible] [illegible] / [illegible]
[illegible] b et c usque ad [illegible] et d [illegible] / [illegible]
[illegible] [illegible] / [illegible] [illegible]
addere a a [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] a ad [illegible] in c / [illegible]
[illegible] a g [illegible] / n [illegible]
[illegible] r / [illegible] / ad [illegible] ad n / [illegible]
[illegible] [illegible] n [illegible] [illegible]
[illegible] non [illegible] non [illegible] / [illegible]
[illegible] x [illegible] b et c [illegible] x [illegible]
[illegible] [illegible] n, [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

Plato in timeo volens reddere causam propter quam visus in se
nostris oculis et cur deus ipse os homini sublime dedit
celum quod videre jussit et erectos ad sidera tollere vultus
non aliam adsignavit causam nisi quam bernardus silvestris
metrice reddit dicens. Quaerenti corporibus cum viventibus
unquam ut est [illegible] celum [illegible] ullus ero. Beata petere [illegible]
[illegible] [illegible] arma [illegible] multis [illegible] quod
mare [illegible] [illegible] tollit [illegible] solus ad astra
caput ut celi leges [illegible] quod motus exempla [illegible]
posset [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] quod [illegible] celum quod [illegible]
ut [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
polo [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] non [illegible] [illegible] [illegible] [illegible] plus quam beata [illegible] ut
dicat [illegible] [illegible] [illegible] [illegible] [illegible] tollere vultus [illegible] [illegible]
et [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ut ad
[illegible] ut ad [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] apud [illegible] bernardum
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] stelle [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non [illegible]
magnitudinis [illegible] [illegible] [illegible] [illegible] plane et alia stelle [illegible]
[illegible] [illegible] [illegible] et [illegible] non est [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] ad [illegible] [illegible] [illegible] [illegible]
celo [illegible] stelle [illegible] et [illegible] non est [illegible] [illegible] stella apparet
ubi non est et [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] et [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ut
[illegible] [illegible] [illegible] [illegible] [illegible] duo [illegible] modi [illegible]
[illegible] [illegible] [illegible] stella non [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non [illegible] ut
reflexam ut [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] linee [illegible] ex [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] et [illegible] [illegible]
[illegible] stella apparet [illegible] et [illegible] duo modi [illegible] [illegible] et [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] linea [illegible] alibi
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] linea [illegible] est linea
[illegible] linea [illegible] [illegible] [illegible]

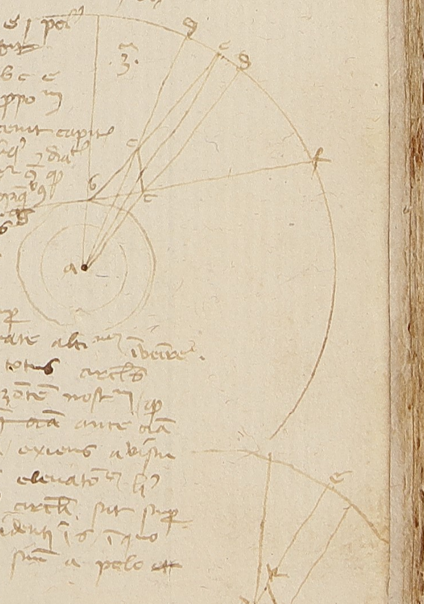
[illegible] [illegible] alibi [illegible]

[illegible] videt ~~[illegible]~~ in celum cum [illegible] est veno loco lune [illegible]
[illegible] et quod luna est propinqua terre et non est super centrum capitis
nostri, ideo [illegible] lune visualis et [illegible] lune vera locus [illegible]
distantes [illegible] non videtur ubi est, et [illegible] diversitas vocatur [illegible] aspectus
lune, et [illegible] quod ab aliquo loco videtur pos eclipsari, et luna
[illegible] et ab alio parte non videtur et [illegible] eclipsis [illegible]. Ex ista
probatione patet quod due [illegible] causa [illegible] diversitatis propinquitas stelle
ad terram cum [illegible], scilicet a centro super orizontem, et quod [illegible]
[illegible] stella [illegible] remotior tanto [illegible] diversitas est minor.
Et [illegible] non [illegible] est in polo et in superioribus [illegible] et [illegible]
hoc [illegible] primo [illegible] superiorem et [illegible] a centro mundi b visus
a stella [illegible] et d superior et apparet ~~[illegible]~~ c et d in
[illegible] loco [illegible] in [illegible] sit [illegible] e et d in f [illegible] est [illegible]
quod e [illegible] f [illegible] e videtur remotius a suo loco [illegible] d. Et de hoc
[illegible] tractatur in [illegible] libro almagesti [illegible] breviter
[illegible]. Et ex noticia [illegible] diversitatis [illegible] distantia
lune [illegible] 2 9° quod stella cometa non [illegible] in loco
ubi est, et [illegible] stella fixa [illegible] qua est in [illegible] super centrum [illegible]
[illegible] eadem [illegible] quod [illegible] et [illegible] maior est diversitas
aspectus comete [illegible] quam est in [illegible] ut dictum
[illegible] luna. Ex hoc patet [illegible] 1° quod [illegible] stelle
[illegible] cometa ut dicit [illegible] quod stella est in celo et
[illegible] in [illegible] cometa non est [illegible] stella [illegible] apparet in [illegible]
[illegible] valde remota [illegible] a stella cum [illegible] cometa et
[illegible] alia stella [illegible] alia [illegible] in [illegible]
cometa non [illegible] quod [illegible] colorata ex refractione visus
[illegible] et [illegible] in [illegible] est [illegible]
[illegible] occupans maxima parte [illegible] et [illegible] color, [illegible] modica
[illegible] 2° [illegible] alia [illegible] 2° [illegible]
quod cometa [illegible] sit [illegible] motu ad occidentem et
[illegible] stella [illegible] qua [illegible] motu [illegible] oriente [illegible] cometa
[illegible] sit [illegible] et movetur motu diurno [illegible] polo est
quod cometa apparet ad [illegible] stelle [illegible]
stellarum [illegible] axe mundi [illegible] orizon [illegible] sit [illegible] et
[illegible] cometa, et axem mundi quo [illegible]
et [illegible] hoc [illegible] quod cometa [illegible]
ad [illegible] quod [illegible]
ad [illegible] et [illegible] stella [illegible] qua videtur [illegible]
[illegible] et [illegible] apparens

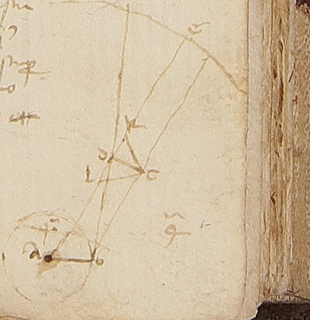


[illegible] exemplo sit a centrum mundi [illegible]
b. visus, et [illegible] cometa e. polus [illegible]

[illegible] stella [illegible] qua cometa videtur [illegible] linea a c [illegible]
b c d et [illegible] 2° [illegible] ut [illegible] quod cometa moveatur
motu diurno [illegible] quod [illegible] est [illegible] centrum et polum ut super centrum
[illegible] in linea meridionali [illegible] polo [illegible]
alia hora et [illegible] ad [illegible] polo [illegible]
elongarum [illegible] oriente [illegible] et hoc est [illegible] et per hoc [illegible]
accideret cometa ~~[illegible]~~ [illegible] a motu diurno [illegible]
[illegible] 4° [illegible] quod circulo quem describeret [illegible] obliquus
et [illegible] obliquus [illegible] ad [illegible]
[illegible] obliquus et [illegible] [illegible] recte [illegible]
[illegible] alia [illegible] motus [illegible] est [illegible]
et [illegible] est [illegible] sit [illegible] quod
cometa est [illegible] stella [illegible] apparentibus, et [illegible] cometa [illegible]
et occidit [illegible] stella [illegible] videntibus [illegible]
apparens nobis [illegible] polo movetur motu diurno [illegible] et
[illegible] quod cometa appareat [illegible] polo [illegible]
et [illegible] sit [illegible] axem mundi et [illegible] stella [illegible] polo
et [illegible] cometa [illegible] et stella [illegible]
[illegible] sit [illegible] axe mundi in linea meridionali stella [illegible]
et cometa [illegible] orizonte [illegible] ad [illegible]
sit a centrum mundi, b visus, c cometa, [illegible] polus
[illegible] stella [illegible] qua est cometa [illegible]
super orizonte [illegible] linea a c [illegible] linea b c e
et linea a c d [illegible] linea a c d [illegible]
[illegible] cometa [illegible] a centro [illegible]
[illegible] circulo quem describeret [illegible]



[illegible] videtur [illegible] diametrum [illegible]
quod centrum [illegible] circuli [illegible] orizon [illegible]
[illegible] polus [illegible] a centro [illegible] polo
b visus [illegible] circuli quem describeret cometa
[illegible] linea a c [illegible]
[illegible] linea b d magis declinata est super
orizonte quam axis mundi [illegible] 9° [illegible] polo cometa [illegible]
sit [illegible] cometa [illegible] circuli [illegible]
quem describeret [illegible] super orizonte nostro [illegible]
[illegible] centrum [illegible] circuli sit super orizonte [illegible]
[illegible] est [illegible] in celo quem [illegible] linea [illegible]
[illegible] centrum [illegible] circuli [illegible] et hoc [illegible] elevatio [illegible]
[illegible] super orizonte [illegible] maior [illegible] circuli sit super
[illegible] orizon [illegible] circuli [illegible]
cometa [illegible] remotior a celo [illegible] a polo [illegible]



ad oppositum

et a cenit capite e regione dorsum et artici polo, et sit illa pars l. et oppositum capite orientis signetur talis pars a quo vel b, ergo cometarum, et et sit k quod post fiet una nocte longiorem descendit sit in opposito duo puncta tantum diametri h circuli apparentis longiorem l q est k l, qui est cometa videbitur inter cenith et polum vel super cenith in linea meridionali et sit eadem linea meridionali

imaginetur linea a cometa

ad medium diametri k l et illa pars meridiana sit

d. quod dico esse centrum circuli quem cometa describit, et linea c d a cometa addita parte

est perpendicularis super axem mundi, et linea

b d ultimo protensa ostendit locum apparentem

sub centro celi et sit elevatio super

orizontem et quo facto fiat alia figura, sit

a centrum mundi et b visus, et perspectiva e cometa

d centrum circuli a cometa descripti super polos mundi

et g centrum capitis sit h punctus in superiori vel directe

sub cometa et q punctus in eadem superficie directe sub polo

celi, sit sub quo est cometa et p. verus locus comete et k punctus

cometa in linea meridionali, protrahatur quod linea ut

in opposito et sit hoc linea b f sit linea perpendicularis

polum quod est equidistans axi mundi, eo quod illa rationem

sit punctus et hoc imaginatur tangens a b d et sit ut primum

linea b f et linea a c sit equidistans et per 29^m primi angulus

g a c vel b a d equalis est equales angulus per b f et est angulus

per b f est notus quod sunt ipsa distat a cenit a polo quod angulus

b a d est notus, similiter angulus d b a est notus quod elevatio d super

orizontem per parallaxim est notus quod residuus angulus est notus et tantum

vel duos rectos et latus b a quod est perpendicularis est notus

ut supponitur quod reliqua latera erunt nota per primum duplicem prima

et sit notus sicut proportio nota, quod sunt tangentes esse ipsorum

arcuum proportio arcuum angulorum correspondentium, esse notum per 3^m cordarum

b latus tangens proportio esse notum, quod sunt differentia erunt corde

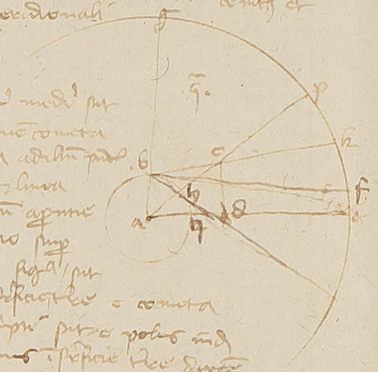
et lateris est notum quod reliquum erit notum per 21^m 17^m

et sexta per tangentis si sunt ablatis ... lateris et reliquum erit

proportionalia per 4^m 6^m ... quod lateris illa et impares proportionales

proportionalium quod sunt proportio lateris ipsius a b d erit nota

fiunt (in margin)



sicut est sicut prius latus b a, et est notus quod reliqua latera erunt nota

quod linea b d et linea a d sunt note, supponitur ad semidiametrum terre

quam supponimus esse notam. Secundo imaginatur triangulus b d c cuius angulus

c b d est notus sicut qui est distantia comete a centro circuli quem

describit et similiter angulus c d a est notus quod est rectus eo quod c d est

perpendicularis super axem mundi et angulus b d a quod est eius complementum est notus

notus per precedentem imaginationem, quod residuus est notus scilicet angulus

c d b, tantum tunc imaginatur quod quilibet trianguli duo anguli sunt noti quod

et tertius erit notus et latus ex precedenti imaginatione similiter quod latus

b d est notum, quod arcus sicut prius latera b c et c d erunt nota

supponitur ad semidiametrum terre. Tertio imaginatur triangulus a b c

cuius latus b a est notum ut supponitur et similiter latus b c ex precedenti

imaginatione et angulus c b a est notus quod elevatio comete

super orizontem est nota, quod est ... instrumento, quod latus c a

erit notum per primum duplicem, prima ... sunt tangentes ... circulo

et corda b a et corda b c sunt note, quod angulus b est notus quod

arcus cordarum b a et b c sunt noti, quod arcus respondens et notus

quod corda correspondens erit nota, et a c per sexta differentia cordarum

quod latus c a erit notum ut sicut prius per sexta tangentis ipsius

visibilis fiendo angulum equalem angulo b per 22^m primi et resultando

lineas sicut proportio b a ad b c et sicut prius per ... inveniatur

proportionales tantum illa tangentis et tale sicut habebitur in tota latera

latera tantum a b c similiter illi et latus b a et latus b c sunt nota

quod latus a c erit notum. Ex hiis quod argumentum quod prius ...

parte lineam quod ... supponitur ad semidiametrum terre. Primo quod ... linea

a d quod est distantia centri circuli quem describit cometa a centro mundi

a qua distantia semidiametrum terre et respondeo notam scilicet q d

quod est elevatio ... centri super terram. Tertio cognoscitur linea b d

quod est distantia visus a centro circuli predicti. Quarto linea b c quod

est distantia visus a cometa. Quinto linea c d quod est semidiameter

circuli quem describit cometa. Sexto linea a c quod est distantia

comete a centro mundi a qua distantia ab semidiametro terre

reperta. Septimo quod respondeo erit notum b h c quod est elevatio sine

altitudo comete super terram quod fuit propositum. Similiter sit propositum

linea a b c ... et directe in celum ipsam ... pars p.

quod est verus locus comete ... quod ... a b d sunt notum per

primam imaginationem et sunt ... b a c per 32^m quod alia ... scilicet

angulus c a d erit notus quod arcus ... correspondens ... scilicet p c

erit notum et hec est distantia veri loci comete a polo mundi

in circulo meridionali et ista distantia est notus veris ...

angulus (in margin)

[illegible] cometa erat notus [illegible] stella [illegible] quia est cometa [illegible] erat [illegible]
et cum loco celi ubi apparet, sicut notum ad sensum [illegible] quod distantia apparens
ipsius erat nota [illegible] [illegible] [illegible] loco ipsius et [illegible] apparens
et [illegible] distantia [illegible] caput a vero loco ipsius et nota [illegible] arcus
[illegible] arcus [illegible] [illegible] et notus [illegible] loci ubi
caderet [illegible] [illegible] [illegible] erat notus [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] ~~[illegible] loca ubi caderent~~ caput [illegible] [illegible]
arcus ignoti poterunt esse noti [illegible] [illegible]
et [illegible] duo loca duo loca [illegible] [illegible] [illegible] [illegible]
ex ista dispositione fiunt nota 13 res ignote [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] et [illegible] non [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] experientia poterunt [illegible]
dum autem apparuerit cometa ~~[illegible]~~ experimentator diligens
[illegible] hoc [illegible] [illegible] [illegible] stellis [illegible] deceptio

[illegible] [illegible] [illegible] [illegible] loquendo de visione [illegible] [illegible]
videndum est [illegible] visionem [illegible] ~~[illegible]~~ accidit deceptio ex
refractione radii visualis et [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible] est quod [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] refracta [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] reflexam [illegible] [illegible] [illegible] [illegible]
[illegible] reflexionis vel fractionis [illegible] [illegible] [illegible] [illegible]
alia [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] et multiplicationis [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] auctores quod [illegible] est radii
[illegible] [illegible] fractio [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] radios [illegible] [illegible] [illegible] [illegible]
radii [illegible] [illegible] [illegible] [illegible] fracta [illegible] [illegible]
visionem [illegible] loca visibilium [illegible] [illegible] deceptio [illegible]
fractionis vel reflexionis [illegible] [illegible] quod radii fracti [illegible]
[illegible] [illegible] non [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] non [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] auctores [illegible] [illegible] [illegible] reflexionis
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ista
[illegible] [illegible] [illegible] [illegible] duo media differentia [illegible] [illegible]
[illegible] [illegible] fracta [illegible] radii visuales [illegible] [illegible]
[illegible] [illegible] [illegible] duo media [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] ad hoc est [illegible] [illegible]
[illegible] auctoritas [illegible] [illegible] [illegible] [illegible] [illegible] experientia
[illegible] [illegible] [illegible] vas [illegible] fundo [illegible] distantia erat [illegible]

[illegible] a qua non videbatur [illegible] vas fuit vacuum aqua [illegible]
videbatur [illegible] fuit plenum [illegible] non [illegible] [illegible] in [illegible] fractione radiorum
[illegible] [illegible] sit ab [illegible] aqua [illegible] [illegible] [illegible] in fundo vasis
[illegible] [illegible] sit [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] vas esset vacuum
~~[illegible]~~ non [illegible] [illegible] [illegible] [illegible] [illegible] impediret [illegible] [illegible]
[illegible] videbatur [illegible] est ~~plenum~~ plenum aqua [illegible] [illegible] alia linea [illegible]
[illegible] [illegible] linea fracta [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] mediante [illegible] non esset in [illegible] fractione
[illegible] [illegible] radius [illegible] [illegible] fractio radii [illegible]
[illegible] radii [illegible] visualis [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
aqua ubi [illegible] fractione radii [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] experientiis [illegible] [illegible] radii
[illegible] non [illegible] et quod omnes alii non [illegible]
obliqui cadentes [illegible] [illegible] ambo [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] radii
[illegible] [illegible] est obliquus [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] obliqui [illegible] ad [illegible] [illegible] radii [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] radios [illegible] [illegible] [illegible] lapidis [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] radii
et [illegible] [illegible] [illegible] [illegible] reflexio [illegible] [illegible]
[illegible] [illegible] [illegible] lapidis [illegible] [illegible] radii [illegible] [illegible]

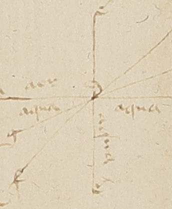
esset obliquus [illegible] ~~reflexio~~ [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] reflexionis [illegible] [illegible] sit ab
reflexionis [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
ambo [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible] ambo reflexionis
[illegible] [illegible] reflexorum ambo [illegible] [illegible] [illegible] obliqui
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] fractio
[illegible] [illegible] [illegible] [illegible] [illegible] radius [illegible] obliqui
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] alia duo
[illegible] [illegible] [illegible] experientias [illegible] [illegible] fundo aqua [illegible]
[illegible] [illegible] [illegible] [illegible] plenum aqua [illegible] sit ab
[illegible] [illegible] [illegible] [illegible] sit aqua [illegible] [illegible] [illegible]

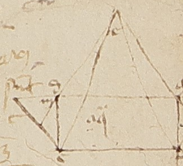
ipse e oculo, ut e visibile c. i. c., videtur per lineam fractam e d c ut docent experientie, et d est punctum fractionis, et quia d q est perpendicularis super a b, et c d f esset transitus rectus, patet statim quod fractio declinat a transitu recto ad perpendicularem. Preterea hoc autem [illegible] antiqui [illegible] communiter [illegible] sic dictum est: radius sine transitu perpendiculari est fortior, nam transitus o[illegible] remotior a recto fractus [illegible] ad agens, et propter hoc si radius in medio densiori procedit secundum rectum transitum esset fortior a perpendiculari, et quia ab agente quanto recto fit debilior et minus [illegible] debilitaretur quo ad [illegible] maior [illegible] et fortior [illegible] recto fit declinatio a transitu recto ~~appropinquando~~ in appropinquando ad perpendicularem et ad agens et ad agentem.

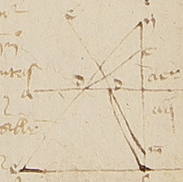
Cor^m Ex quo patet sic recto quod [illegible] est [illegible] 16, quod [illegible] quod [illegible] est subtilius sic quod radius [illegible] de densiore [illegible] ut [illegible] in aere [illegible] debilis a transitu recto appropinquando ad perpendicularem [illegible] debilis fit elongando a perpendiculari et a transitu recto ad perpendicularem et fractio. Ex quo [illegible] erat visibile ut cum hoc sit oculus sine visus in aqua [illegible] per eandem lineam per quam [illegible] oculus videt e [illegible] e videt e per lineam c d [illegible] esset transitus rectus et h d est perpendicularis, patet quare fractio [illegible] est a perpendiculari [illegible] transitus d h quia transitus rectus est [illegible] fractionis et perpendicularem et ab alia parte ut visum est, fractio est [illegible] et perpendicularem et transitu [illegible] patet per experientias perpendicularem [illegible] et per omnes auctores [illegible] actoris, et est [illegible] causa [illegible] esset [illegible] fractionis quam diaphaneitas facit [illegible] perpendiculari subtilius faciat elongare. Et hoc probat [illegible] ista [illegible] 4 [illegible] et [illegible] 10 [illegible] et alhazen in 7º [illegible] 3º est quod quare res

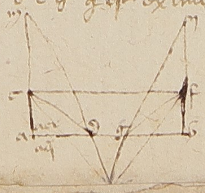
3^m ~~videtur per lineam fractam et in linea [illegible] [illegible] fractionis~~ [illegible] transitus rectus ergo ipsorum [illegible] e visum [illegible] apparet in linea c d f et [illegible] ergo e visum [illegible] apparet in linea [illegible] c d h [illegible] autores per experientia sic alhazen in 7º [illegible] 5º et [illegible] 12 [illegible] demonstrat [illegible] et [illegible] res apparet [illegible] linee [illegible] oculo [illegible] fractionis [illegible] linea perpendiculari [illegible] a re visa, ad superficiem [illegible] medii [illegible] si est plana, et si sperica [illegible] ad superficiem plana [illegible] sperica [illegible] fractionis, ergo de plana e apparet visui e [illegible]

et e apparet visui c [illegible] in puncto n. Ex quo sequitur statim quod e apparet propinquius visui quam sit vel quam si videretur per lineam rectam non fractam, et e apparet remotius visui quam sit cum si videretur per lineam non fractam, et hoc apparet ex [illegible] 10 [illegible], scilicet quod [illegible] est [illegible] et quod res apparet [illegible] quam est, et hoc [illegible] 12 [illegible] 10 [illegible] et [illegible] in 7º [illegible] 5º [illegible]. Et propter hoc apparet baculus fractus cum medietas est in aqua, quia pars que est in aqua apparet visui propinquior quam est, et si oculus esset in aqua ab eadem parte baculi [illegible] apparet fractio ergo [illegible] sit c d f baculus [illegible] si c oculus sit in aere [illegible] baculus apparet secundum [illegible] fractum c d [illegible] quod si c oculus sit in aqua [illegible] baculus apparet secundum [illegible] fractum [illegible] baculus fracta perpendicularis ad superficiem a b [illegible] non apparet fractio quod [illegible] radiorum [illegible] perpendiculariter [illegible] baculus ut apparet fractio ex predictis [illegible] ab oculo existente in aere medietas baculi que esset in aqua apparet brevior quam sit vel quam videretur per idem medium, et ergo ab oculo existente in aqua medietas que est in aere apparet longior quam sit, et sic [illegible] ab aqua medietas baculi que est in aere apparet longior quam sit [illegible] que est in aqua, ergo si c oculus sit in aere [illegible] f [illegible] existens baculi apparebit in puncto n, et sic baculus apparebit secundum lineam n c, et si oculus sit in aqua et existens [illegible] apparebit in puncto n [illegible] et sic baculus apparebit secundum [illegible] f n [illegible] apparebit longior ab aqua quam ab aere, et hoc docet experientia. Ex quo [illegible] apparet [illegible] que [illegible] vel res [illegible] aqua apparet maior quam sit [illegible] [illegible] medii sit per aerem vel aqua [illegible] maior [illegible] anguli [illegible] fractionis [illegible] non omnis linea [illegible] [illegible] est aliquas esse obliquas et frangi. Ex [illegible] et f [illegible] res visa et c sit oculus et c videtur per lineam fractam c d e, ut patet per [illegible] et [illegible] fracta c d f in aere [illegible] videretur per lineas rectas c e et c f [illegible] [illegible] linea [illegible] apparet maior quam [illegible] videretur per aerem [illegible] vel per aquam et sic fractio [illegible] quod apparet propinquior [illegible] existens e apparet in puncto n ubi est concursus perpendicularis cum radio [illegible] et apparet existens f apparet in puncto n ubi est concursus [illegible] apparet per hoc [illegible] maior [illegible] per [illegible] plus vapores disgregant radios visuales [illegible] quod [illegible] non [illegible] ut [illegible] oculus est in aqua et res visa in aere [illegible] apparet maior quam si [illegible] videretur per [illegible] eo quod linea frangitur ergo non apparet sub ~~[illegible]~~ angulo maiori apparet [illegible] a d [illegible] angulus c e f maior est angulo d c [illegible] ex lineis fractis apparet [illegible]









Ex quo omnino patet quod apparet remotior quam sit c apparet in m et f apparet
in m. Item 2m [illegible] ibi apparet videntur radii cadentes cum perpendiculari
[illegible] abaximitatibus [illegible] visui ad superficiem a d [illegible]
et hoc habetur in 4o capitulo 4i perspective. Item 4o quod oculi
ut linea protensa ab alia stella ad visum nostrum est obliqua cadens
super superficiem ignis sive aeris in stella sunt super caput
Item quod sicud quod linea perpendicularis super aliquam superficiem sphericam
est illa que ultra protensa veniret ad centrum quod solum talis facit
cum superficie angulos equales et sic omnis alia est obliqua et nulla veniens
a stella inferiori orizonti procedit ad centrum in visu apud
que est super centrum terre quia omnis alia super spheras medias
cadit obliqua ut que sit b centrum mundi c oculus et q stella que
non est super centrum quia est f et ab superficies ignis tunc patet
quod linea q c non est perpendicularis super a b superficiem
et quod facit angulos inequales ut ultra protensa procedit ad centrum

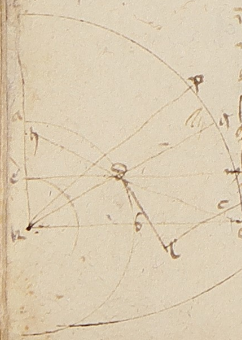
Item 2m [illegible] sit causa obliquationis distantia a centro ut nota
est et propinquitas ad superficiem spherice ad elevationem vel elongationem
a stella manifestum est quia quanto est maior distantia a puncto
quod tanto magis distant linee q c et q b quanto tanto quod c magis
oblique cadit et longius a perpendiculari quo magis est obliqua super

5a

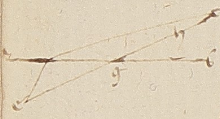
aeris superficiem quam super superficiem ignis quia ignis est sphere lune vel
solis et sic de aliis et quanto [illegible] tanto est maior fractio
[illegible] [illegible] [illegible] sunt diffinitionem modos. Item quod
quod aer est grossior quam orbis [illegible] sive ignis aut celum [illegible]
quod sic orbis [illegible] orbis aliis celestibus spheras [illegible] est [illegible]
et grossior et videtur quod ignis levissimus quod orbis superficie [illegible]
[illegible] super excedens alia celestia rarior et lenitate et [illegible]
tota grossior est quam aer et aqua quam aer in visibus videtur propter
sit grossior ipso igne [illegible] non proportione et potissime [illegible]
quod celum [illegible] excedit alia mediata elementa subtilitate sicut
in loco ignis stellis exceptis que sunt celi lucida. Item 2o videtur
quod magna aeris quantitas [illegible] visum valde debilitat visum
et quod [illegible] [illegible] in aere [illegible] [illegible] obscurat sed
elongatio maxima incomparabilis quam spera ignis [illegible] speras celi
non facit multum magnam obscuritatem et est [illegible] est satis
manifestum quod [illegible] non [illegible] grossiores sunt aere. Item [illegible]
sit [illegible] [illegible] aeris esset inter lunam et stellas fixas [illegible] est
corpulentia [illegible] celi stelle non possent a nobis videri
Item 2o ex rotatione aliarum de corporibus [illegible] quod aeris [illegible]
[illegible] reflectionem radios solis sunt corpulenta et [illegible]

et de mane quod [illegible] alium [illegible] aeris est grossior quam
[illegible] quod est sit et quod non potest [illegible] lucem solis et [illegible]
grossior aeris vapores [illegible] aliorum in 10 [illegible]
multa [illegible]. Item 4o arguitur ad conclusionem quod stelle fixe videntur
per lineam fractam a perpendiculari quo videntur per diversa media que
super est vertice sunt 2m. Item [illegible] per [illegible] experientias
adinvenientas in [illegible] 7a [illegible] quod non per aliud frangitur
radius visualis et per illud frangitur [illegible] ut patet ex
[illegible] 2e conclusionis. Item 2a [illegible] est quod quelibet stella que non est super
centrum videtur per lineam fractam a perpendiculari [illegible] quod radius visualis
de oculo ad stellam cadit super aeris superficiem obliquus per 4am
conclusionem et aer est grossior celo per 4am conclusionem quo radius [illegible]
frangitur per primam conclusionem quo frangitur a perpendiculari per conversionem
2e. Item et [illegible] videtur quod sit adinventio nova facta per
auctoritatibus et [illegible] manifestis experientiis antiquorum. Item [illegible]
in [illegible] [illegible] in 4o de aspectibus ut [illegible] in lo
de aspectibus et [illegible] hoc sunt alacen in 1o c. 4o et vitulo
in 10 [illegible] 4a perspectivam [illegible]. Item una experientia est experientia
de stellis [illegible] sit una [illegible] nocte
in [illegible] meridiano que est [illegible] centrum et per instrumentum
armillarum capiatur eius distantia eius a polo mundi [illegible] alia
vice dum eadem stella sunt in puncto [illegible] noctis prope orizontem
[illegible] per instrumentum notetur eius distantia a polo et invenietur
multo minor distantia eius a polo quam fuit prima et tamen erat
[illegible] [illegible] in rei veritate equaliter distat a polo
in [illegible] per motum 8e sphere sed hoc non facit differentiam [illegible]
et quod istud non potest radere [illegible] stella super videretur per lineam
rectam et que f est super centrum [illegible] est super perpendicularis
et non frangitur quo que est prope orizontem non videtur per
rectam lineam sed per fractam. Item alia experientia est [illegible]
[illegible] [illegible] notetur aliqua [illegible] que [illegible] super centrum vel
prope et [illegible] ut [illegible] videtur per instrumentum distantia eius
a polo quando erat versus orizontem et [illegible] quando erat [illegible] centrum
et apparebit per instrumentum minor eius distantia a polo quando est
[illegible] [illegible] quam dum est [illegible] centrum [illegible] non potest [illegible] super
[illegible] [illegible] in stella dum est versus orizontem videtur
per lineam fractam. Item aliud experimentum de luna quod sit [illegible]
[illegible] sunt a [illegible] [illegible] [illegible] distantia eius a polo
et declinatio [illegible] [illegible] [illegible] quando est prope

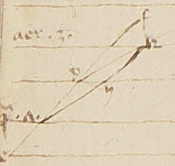
tamen est experientia facta facta per instrumenta describit [illegible] [illegible]
per tubulos quod luna existente in medio celi [illegible] quam est prope orizontem // Ergo 9°
patet quod dicit oculos non videre recte per fractionem. Et ex predictis
istis experimentis patet modus quo fractio lune perveniens de celo ad
stellam fit recedendo a perpendiculari // Verbi gratia sit a centrum mundi c. celo
et c stella, et b. sit polus, et quod stella dum est prope orizontem
apud propinquiorem polo quam sit in vero vertice sit [illegible]
[illegible] et sit fractio in puncto d, sit quod q. d [illegible] perpendicularis [illegible]
superficiei aeris, patet ergo quod linea fractionis d e plus recedit
a perpendiculari quam recta incessus, d [illegible] sicut apparet a stella
veniendo usque oculum [illegible] et [illegible] erat [illegible]
d c erat [illegible] [illegible] recti c d [illegible]
perpendicularis a d b [illegible] extra [illegible] patet per ex-
perientiam demonstratur [illegible] 14° [illegible] [illegible] [illegible]
ostendit [illegible] est que experientia vocatur quod [illegible] [illegible]
et [illegible] non obviat [illegible] 9° est, quod omnis stella, que non
est super centrum videtur alibi quam sit, et hec est solutio questionis quod stat
[illegible] in medio pervenientes omnes tales videntur per lineam fractam
[illegible]
[illegible] in [illegible] c stella, apud visum e, in directo linee [illegible]
elevatio super orizontem [illegible] linee e c d [illegible]
[illegible] a superficie plana [illegible]
[illegible] [illegible] ducta [illegible] stelle [illegible]
aeris, in puncto d, [illegible]
[illegible]
in aere [illegible] elevatio [illegible] super orizontem [illegible]
ad polum [illegible] [illegible] quod [illegible]
3° quod apud [illegible] a nobis quam [illegible] videretur ~~recte~~ quam est
super centrum et [illegible] alia [illegible] visus videat
stellam magis distare quando est prope orizontem [illegible] visu
[illegible] 4° alasen in capitulo [illegible] stella elevata
[illegible] visus [illegible] non [illegible] distinguit [illegible]
[illegible] in orizonte, et ex hoc videt distantia videtur stella
[illegible] esse maiore propter
magis distare [illegible] hoc [illegible] videtur [illegible]
quod non essent vapores [illegible] apparet stella
[illegible] ad maiorem [illegible]
quod [illegible] radii stelle franguntur in [illegible]
[illegible] [illegible]
[illegible] talis [illegible]
[illegible] aeris [illegible] [illegible] ascendendo ~~usque~~ usque



ignis et in ordinate quod sit ubi est difformitas [illegible] et sic
illa est superficies [illegible] in medio [illegible]
in medio gradu nobis [illegible] ad fractionem et
hoc est quod dicit alasen in 1° capitulo [illegible] magis [illegible]
[illegible] tanto magis [illegible] donec fiat ignis, [illegible] subtilitas
sit ordinate [illegible] [illegible] et non in [illegible]
non sit fractio [illegible] aere et igne [illegible] [illegible] ignis
[illegible] donec fiat [illegible] ad [illegible]
orbis lune et in orbis lune [illegible] superiores [illegible]
[illegible] fit fractio. Respondendo [illegible] Responsio
[illegible] non [illegible] dubitare quin sit fractio [illegible]
[illegible] est demonstratum per experientias [illegible] antiquorum ut
patuit [illegible] bene demonstratum [illegible]
dubitare ubi sit huiusmodi fractio [illegible] rationem dicit alasen
quod [illegible] fractio non sit in [illegible] celi [illegible]
[illegible] ex parte ignis et aeris ut dicit [illegible]
[illegible] 10 [illegible] orbis lune sit huiusmodi
fractio et non [illegible]. Ex [illegible] aere [illegible]
a [illegible] vaporibus [illegible] orbis celi non
differt nobis a subtilitate. Et 2° posset [illegible] quod fractio 2°
fit nobis [illegible] superiori [illegible] vaporibus subtilioribus
[illegible] refractionem [illegible] apud quod [illegible]
est magna [illegible] nobis [illegible]
aer reflectit radios, et in superiori hoc non [illegible]
[illegible] vapores subtiles possunt radios reflectere [illegible] post
radios frangi [illegible] lucente sole
[illegible] tales vapores [illegible] apparere [illegible]
[illegible] non [illegible] fractionem radiorum
[illegible] [illegible] quod ignis aer [illegible] 3°
Et 3° [illegible] [illegible]
ordinate ascendendo et non [illegible]
usque [illegible] difformitas [illegible] [illegible]
radios [illegible] fiat fractio
ad [illegible] sit [illegible]
[illegible] radii perpendiculares [illegible] obliqui [illegible]
[illegible] perpendiculares [illegible] cadunt super superficiem
[illegible] oblique super [illegible] obliqui
[illegible] superficies [illegible]
[illegible] est [illegible] [illegible]
[illegible] ~~[illegible]~~ [illegible]
[illegible] [illegible] radii [illegible]
[illegible] perpendiculares [illegible] perpendiculares [illegible] obliqui



obliq[ue] [illegible] videbatur per lineam c d e, fracta non videtur [illegible]
per lineam curvam c [illegible] hic [illegible] in directo lineae [illegible]
[illegible]. Et [illegible] non potest explicari [illegible] in tali casu esse fractio
aut non, sed auctores dicunt, quod non sola auctoritate [illegible]
quod per aliam rationem [illegible] oculus [illegible] visa [illegible]
[illegible] oculo [illegible] sed quod [illegible] densitas aeris
[illegible] intersectione [illegible] densitas, sic densitas, sic
[illegible] fractio c d e [illegible] inter [illegible]
sic .8. intersectiones [illegible] sic sex
[illegible] aeris [illegible] sic 4ta [illegible] sic .2.
[illegible] a mediocritate superiori
[illegible] imaginationem [illegible]
[illegible] in inferiori [illegible] debere [illegible]
[illegible] fractiones [illegible] equaliter [illegible] facere
[illegible] deceptio [illegible] considerando [illegible] medio
et obliquitas lineae [illegible] 2^a [illegible] variatur [illegible] angulorum
[illegible] est [illegible] [illegible] videtur [illegible]
non potest [illegible] imaginatio [illegible] talis
[illegible] refractio [illegible] videbitur [illegible]
[illegible] per unam [illegible] 3as vel 4as aut per quotlibet [illegible]
[illegible] equaliter [illegible] imagine
[illegible] videbatur per unam fractionem [illegible]
[illegible] videbatur [illegible]
[illegible] fractiones [illegible] per [illegible] .6. [illegible]
[illegible] [illegible] aliorum medii [illegible] non
[illegible] hoc esse [illegible] nature [illegible]
[illegible] hoc [illegible] aliqua [illegible] mutatio et [illegible]
[illegible]
[illegible] aliqua [illegible] patet ex [illegible]

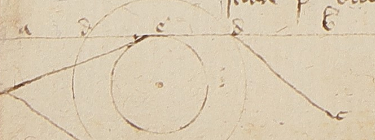


[illegible] una linea [illegible] equaliter
[illegible] 3^a pentagonum [illegible] ut
[illegible] non [illegible] radii [illegible] et linea
[illegible] ut possit [illegible] demonstrari [illegible]
linea [illegible] c d e [illegible] videbitur [illegible]
per lineam [illegible] aut quod in tota [illegible] videbitur in
[illegible] loco [illegible] fractiones et [illegible] videbitur [illegible] esse
[illegible] linea recta [illegible] mutari [illegible]
[illegible] res visa [illegible]
[illegible] loco [illegible]
[illegible] radii esse [illegible] mutaretur
[illegible] videtur
[illegible] in 2° [illegible] non
[illegible] naturale [illegible]
[illegible]

res videretur in loco f et postea [illegible] in loco e [illegible]
[illegible] [illegible] aliqualiter [illegible] sed solum [illegible]
alterius medii [illegible] et quod radii vel visus [illegible] esse [illegible]
loco f postea [illegible] in loco e valde distans [illegible]
medio, et hoc ipso [illegible] non mutato, sed solum ut dictum est
alterato medio [illegible] restat [illegible] et quod [illegible]
[illegible] tale [illegible] reflectunt [illegible] non solum recte
sed oblique [illegible] et [illegible] 3° [illegible] assumptione
sed in [illegible] fit reflexio obliqua [illegible]
fractiones vel [illegible] radii [illegible]
nobilis differentia [illegible] ita [illegible] fit nobilis [illegible]
a recti[illegible] [illegible] angulis [illegible] non est nobilis
[illegible] fit non nobilis [illegible] a recti[illegible] non [illegible]
sed [illegible] sic [illegible]
ad recti[illegible] [illegible] ad fractio[illegible] rectas lineas
[illegible]
[illegible] fit fractio [illegible] ex recta [illegible]
[illegible] nobilis [illegible] fit fractio ad [illegible]
ex omnibus lineis [illegible] ex [illegible] aer est clarus
radii [illegible] loco nobili [illegible] a recti[illegible] [illegible] fractio[illegible]
aut [illegible] aque [illegible] aque [illegible] aere [illegible]
aere puriore [illegible] aere vaporoso [illegible]
[illegible] alhazen in [illegible]
[illegible] non [illegible] sed illa fractio non est nobilis
[illegible] radii et actiones [illegible]
[illegible] lineas tortuosas [illegible] ex [illegible]
[illegible] ad [illegible] linea recta [illegible]
[illegible] vapores aut [illegible] ex [illegible] vel ex [illegible] aer
[illegible] [illegible] aliqualiter [illegible]
[illegible] lineas fractas [illegible] aliqualiter [illegible]
[illegible] est [illegible] vel in loco [illegible] est [illegible]
[illegible] per lineas non rectas
sed [illegible] est [illegible] impossibilis [illegible]
[illegible] et [illegible] et visione [illegible]
[illegible] 2° [illegible]
[illegible] radii [illegible]
[illegible] ad aerem [illegible] aer [illegible]
[illegible] est [illegible]
[illegible] 2^a [illegible]

io cu rad' perveniat ad aere ifrigidio se'm illi vapor ex caliditate et puritate gtinuatu nostro visu tc ille radi' refrangi' adpte oportz sic habet i 41. 10. vitulo et vrz qn sz mediu est dypsi' feaci'. et qn 3m medium est rari' itz refrangi' ad oy p'e fractio, et tc i propo' q q 2a fractio pot refo'a dispro q gtingebat ex prima, et sic adhuc stelle videbuntur i suis locis. Respodet qn aer e purificatur a nobis tc no est dyspsior. inmo rarior q ifra, ubi sunt vapores exalati et evaporati ut magis q supra io no fit 2o talis refractio q si fiat no tu recompensat dispro q ex prima fractio fit sic evidenter denotat, exemplu i 6a q. pradutta sz supra q stelle videntur alibi q i suis locis, et vocatur fiat 2a fractio cu dispropor' q si ex alto videre stellas de nocte, aerem respicere post p'a fractio et au 2a et sic obesset, sic stellas adpte vider tamen habet aut illic uno modo olim sed si artifani numeros respiciant et verum est q p plures fractio et ideo res pt videri i suo loco, sz no tu clarius ut est radi' i frons, v'z

qui p' media, quod in medium fit crossi' et sic e et e visibile tc b radi' e d frang' p' approp' q si sz medium est dyspsi' et fiet fractio d f postea d f frangit appropriat q 3m medium est rarius et sic f e e s q gtingat, sic est possi b z f distal a c e e d e et directe adiungeret ad e, tc e videret d ex p' q q accidit q e videat supra aut illic q sit. tc videret i propo' vo no gtingit q p duas fractio stelle videantur i suis loc' sz sup alia q sit sic est demo'stratu et sic ivulata manu nostra go evidens c ex quo in istis dictis, sequit aliqua q possunt ex prioris exponi patz pt patz aliq q q 9.6. et a p'ti dem'strato aperiore et effect i q est talis questio p' evidens vios p'as experientias p' 6a qo adductas de 5 et 6 pt patz i co istis, sz patz ex uno propo' istaru pr pz aliqz et est q si m'ti et q i orizonte plano aliq stella q est i equinoctiali circulo p maior tps apz sup orizonte q sit post q d 6z qon vis q plaz fractio a propo' est sic q sup'ficies orizonte a b et stella pt videri p lineam c d q videbitur an' in vero ortu
b



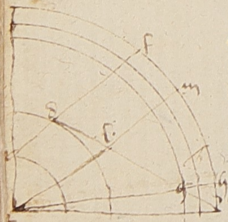
et sole post occasum cu g' aer equinoctiali q est sup orizonte et arc q est sb orizonte sunt equales et pp'ea motu celi, et talis stella videbitur p'ore arc inferior, statim sup' q p'mu apz apz sup fracta q latera sb orizonte absconditur et sic 9 exemplu pz q sol diurnus videt i mundi vapore, planu au post i tps plano i sb illa no esset apz. et sole et q passus arc videri poles p tales fractio q q limites rectas sup apz et 2m est 2m q ne est equinoctiu sole existente i p'o puncto arietis et libre q dies artificialis est apto pole sup pleaz m q fractio rationes pol apz sup orizonte plani, au q et sic i rei veri et sic dies no pol est lanc pole i orizonte q i equalis canon sb orizonte. Sz est apto pole sup orizonte q est diurnum nocti longior, ut p pz ex dictis qo tc dies artificialis e m longior nocte, et sic ne est equinoctiu et 3m est q dicendu i stella fixis qz una apz oriri et alia occidere qn erit q q stella q ne occidit apparet i ortu et alia ne apparet occidere. Sz apz occasum apparent apz simul sup orizonte ob q p' ex p' dictis, apz q si stelle no sit apte q sit apert p'a bis sz arc q est stella, m' est illo, q est sup fractz q ba vice q' apz arc est sup fractz adhuc et hui fractio apparent m' i sup, et stelle ipse app'er q simul et stelle et fracte p'z ipsa stat sic stelle g et f sint. i. contrar' et a. sint oppo'. sz fractz et a b orizo' tc p'a vice magna arc c f q apz semicirculo et 2a vice arc q f c g et idz q arc q a c apz m semicirculo et adhuc m q sit q apz sit i9 fm e q d e 4m q aliqs stellas oras apz sup fractz est post et no erit oppo' sit sz una esset i a et alia i b, patz apz altior q sint p precedentes fractio et 5 est absolvit et lima q i orizonte plano pole est simul videri sole et luna eclipsata, luna videtur videri et sole videri occasu et hoc idz apparet de motis aliis et sibi una facere, et i'a facere tls fractio, q aut pole sit lima eclipsata et sole videri simul apz sup orizonte i plano pz q plinius q n'rat sic suz libro 2o naturalis i'storiaru ca 13o. et quia via vone cu solis orte umbra illa obscurando p terra, apz debeat semel cu nocte i cursu ut luna defecerit utroq3 sup terra apparens sole et nostro ero accidit i p'acione vapperanas pars ac sila cu m e q 9 est q mortalis st stat q est vigilans aut valde s sup' apolar tristatibus, p'z sup circulo qui describit, alia stella i circumus sup' contra q si' circli q sit motus fracta videbitur auge videlicz et maius fractiones q alia, q'z apparentie.

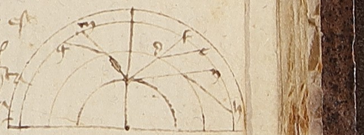
inequales quia motus qui super eos fiunt, propterea equaliter apparebunt
inequales et motus inferiora videbuntur minor et motus super eis
apparebit tardior et tunc equaliter alia stella que ultra circuli
quelibet puncta apparent propter illas fractiones. Et 6ª est quod circuli descripti
a stellis proportionaliter circa polum non apparent perfecte circuli sed
oblongi scilicet ovales aut lenticulares quamvis sic aliqui tales circuli
videantur vere et apparenter circulo aut sic quelibet puncta
circuli videantur equidistanter, sed ista patet ex dictis, quod non
omnia puncta linee propter ad visum equaliter obliquantur super
superficiem aeris, sicut igitur non omnia videntur equaliter remota
sed sic fractiones inequales quod patet ex probatione 6e conclusionis
sed sic stella existens prope cenith apparet remotior a polo quam dum
eadem stella existit prope orizontem, patet a centro circuli quem describeret
existens inferius prope orizontem et sic [illegible]
quod non potest esse in hoc circulo apparente vel oblongus, et si quis
hoc observaverit et perscrutatus fuerit, possent aliqui periti seu curiosi experti
hoc observando et perscrutando audacter affirmare quamvis aliquos [illegible] ultimo
[illegible] et probandi curiose et sic aut alia vera experientia, quia
non sum adeo certus quod nunc in bono possum experire et probare

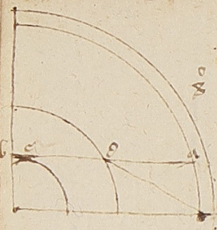
Alia correlaria (1ª) est quod quelibet stella apparet magis elevata super orizontem et propterea
[illegible] quam ipsa sit, et ipsa esset vere super cenith quod propter [illegible]
6ª quelibet talis videtur propter fractionem a perpendiculari quod patet ex 3ª.

(2ª) Correlaria ipsa apparet magis elevata quam sit et patet ex
firmatis precedentibus. Secunda est quod stella que est in alio
nubes circulo parallelo apparet remotior a suo vero loco, id est
loco stelle quam patet, quia fractiones linee existens declinatio [illegible]
in puncto altiori propter communi stelle et propterea stelle [illegible] stelle
alterius, et propterea quod videtur plus fractura [illegible]
et propter 3ª conclusionem apparet in directo linee [illegible] vero
loco, ~~in inferiori et propterea quod videtur~~ plus fractura
(3ª) sit in loco quam sit, sed patet fractione quod videtur remotior
a suo loco quam [illegible] maxima deceptio, ex tali fractione est
de stellis fixis. Et 3ª est quod quando apparet vera gradus planetarum [illegible]
(4ª) non est et quando est non apparet et loco vera gradus eius
quia scilicet linea pendens [illegible] stelle per propria
a semper apparet quia apparet gradum m f et non
in gradus patet quod apparet gradus videtur [illegible] descendere sic
(5ª) patet quod esset in linea [illegible] et 4ª est quod elevatio poli
non est tanta sicut apparet quod videtur propter lineam fractam et sic de
[illegible] elevatione [illegible] capricorni aut arietis et sic
de aliis. Patet dicta quod in prima correlaria et 5ª est quod elevatio
poli videatur in vera proportione quam ipsa proportio et quam circulo paralleli.

[illegible] est maior distantia a cenith tanto est maior deceptio
in videndo loca stellarum propter huiusmodi fractionem. Et dicit quod alia stella
que sit super cenith aut prope et consideretur distantia eius a loco
scilicet vero apud polum, et est illa distantia apparens sicut arcum c f
deinde eadem stella sint opposita, et prope orizontem sub polo
observetur et apparens distantia eius a loco vero apud polum quod
distantia sit arcus f m. Quod erit maior quam erat arcus c f ut
patet per experientias adductas in probatione 3e conclusionis, et sic sine nulla
esset deceptio in visione poli sed distantia eius a cenith et deceptio
in loco stelle quod est prope orizontem esset propter [illegible] de tanto
quo arcus f m est maior quam arcus c f, sed nec est duplo maior
deceptio quam si opposita quod duplo plus distat stella a cenith
quam polus, quod excessus quo arcus c f excedit arcum f m
est notus quia est duplicatus, et sic deceptio in visione stelle
que est prope orizontem est nota, et vero loco ipsius erat notus
propter ipsam esse propinquiorem orizonti et minus elevata quam apparet propter
excessum duplicatum arcus c f super arcum f m duplicatus et
propter deceptio et visione poli est duplo minor ipsa erit non
quo polus est minus elevatus quam apparet propter excessum quo arcus c f
excedit arcum f m et sic arcus est notus quod sequitur propositum
sit in quam polus sit et arcus f h sunt equales, arcus c f h
arcus f p et arcus f m h sunt equales et arcus m c inferior est
(6ª) quelibet ipsorum duplus. Et 6ª est investigando vera loca stellarum
huiusmodi deceptio posset inveniri quamvis ex premissis evidens patet quod
est deceptio stelle c in visione que est prope orizontem in linea
meridionali et propterea sunt super cenith vel in visione poli
et quod propterea quod equales deceptio sed distantiam a cenith
comparando est distantia cum loco igitur propter proportionem quanto plus
vel minus distat a cenith quam c aut quam polus, et tanto maior
vel minor erit deceptio in ipsa visione propter huiusmodi fractionem et
propter quod distantia stellarum apparet minor quam sint sicut videtur sicut
patet in figura. Si vera stella sit alicubi prope cenith et alia
alicubi [illegible] c stella apparet in f et g in m et apparet prope [illegible]
quam sunt et stelle si fuerint alicubi prope ipsum cenith et fractio
non sit equalis, verbi gratia c apparet in f et h in m et maior est arcus
g m quam arcus f g quod verificatur adeo quod arcus c h erit arcus
c m quod est vera distantia stellarum maior quam arcus f h quod est apparens
distantia, et cum eadem sit maior distantia huius stelle quam apparet distantia stelle
est deceptio in visione diametri stellarum, sed non in magna et [illegible]
diameter stelle apparet minor propter huiusmodi fractionem, et sic minus cum quam sit
esset super cenith et hoc totum propter causas [illegible] per Witelo 4º 10.







8º et ita ex tunc videri pz qualiter adaptetur hoc sic omnis
et quo dixi consequens quod sol et luna conjunctim vel luna et astra super orizontem
planum quod videatur oriri et quod hoc videtur per lineam rectam
et aptz per solem per verum occasum et sit igitur c sol aut stella
et ab superficie orizontis pz quod c taurum apparet in c visus
per lineam fractam c d e [illegible] sit in a, et apz in a, [illegible] sit in
et in occasu et hoc aut est vera si orizon ... plano plano
et aere ... ubi est visus, si aut orizon
... visus vel visus ... orizontis non est superficies plana
sed ... linee fracte
[9º] c d e ... et excedit quod plus quam ... ad
[10] videtur ... plana ... ut ... et 10 quod ...
... magnitudo et ... sol ...
polus ... non ... sed sol ...
... regione illa ...
11º ... quod ... possunt ... ad
... quod ... ad ... vel ... est
... fracto sit
... fracto ... obligatur
... fracto ... fracto ... possunt ...
12º ... et 12º ... non mutatur ... et ...
... obligatur ...
... fracto, fracto ... Ex quo pz
Nota ... quod ... localem
... reflexio aut ... de loco
... fracto ... linee ... videtur ...
... superficies ...
... videtur ... quod sol ...
... quod ... sol ...
... fracto ... superficies ...
... superficies ...
13º ... et 13º pz ...
... sol ... ad ...
... sol ...
... sol ...
... fracto ... quod ...
... reflexio ...
... quod ...
14º ... non ... et 14º ... quod ...
... quod sol ... quod ...

et ... ut ... et quod ... plus solito
aut quod ... et quod ... vel ... et linea
... aut quod ... sol ... et ...
vel quod ... vel ... linea et alia stella
et quod pz ... quod reflexio ... vel ...
... et ... aut ... vel ...
... quod ... quod variatio reflexionis ...
... quod ... fracto ... et ...
... et ...
et ... reflexio vel
reflexio ... sol ... et ... et
... sol ... quod ... reflexio
aut fracto ... 3º ...
... fracto et ... reflexio ... sol ...
... vel ... et linea ...
vel ... et ... effect ...
... sol ...
sol ... vel ... est ... quod est ...
quod ...
... vel ... et alia colorata ... sol ... et
... et linea ... non ...
... color ... vel ...
... sol ...
... et ... ad ...
... non ... linee ...
et ... quod ... in 1º ... hoc ... quod ...
quod reflexio ... aut quod fracto ... et ...
... non videtur sed ... imago ...
vel luna ... planeta ... stella ... et ...
... sed ... imago ... quod ... ex ...
... quod ... aut ... sed ...
... quod ... est ... et ...
... et ...
no ... sed ... et ... Nº
... quod ... est ... imago, vel ...
imago ... est ... videtur quod ...
... fracto
... reflexio ... quod hoc est ... fracto
... reflexio ... quod ... non ... imago ... visus
reflexio ... fracto et ... aut ...
quod ... reflexio ... hoc ...
... quod ... 3º ... est ... quod ...

[illegible] reflexiones [illegible] representare colores [illegible] et aliud
apparet et non plana [illegible] representant colorem aut lucem
ut [illegible] [illegible] reflectuntur
[illegible] apparent [illegible] hoc et illud [illegible]
[illegible] tale [illegible] [illegible]
omne [illegible] reflectunt [illegible] lucem [illegible]
apparet [illegible] est apparendo [illegible] visibile [illegible] reflexe
[illegible] et [illegible] lucem videtur [illegible]
et [illegible] sunt duo visibilia [illegible] lux et color [illegible]
lux non [illegible] visibile [illegible] talis
[illegible] visibilis [illegible] [illegible] [illegible]
[illegible] lux [illegible] hoc [illegible] lux est [illegible]
visibile ut [illegible] visibile [illegible]
[illegible] aut [illegible] aut [illegible]
reflexionem [illegible] colorem / colore non [illegible]
non [illegible] videtur [illegible] lucem [illegible]
[illegible] videatur lux reflexe et aliud [illegible]
videri est [illegible] ex colore et luce / ut est possibile videre
colorem [illegible] / [illegible] potest
[illegible] colore [illegible] cum luce solis et [illegible]
apparent mediantibus pluribus [illegible] diversos colores [illegible]
[illegible] color medius [illegible] / [illegible] apparent [illegible]
[illegible] solis / [illegible] colorum [illegible]
videri [illegible] colore [illegible] medii et luce solis [illegible]
[illegible] visionis [illegible]
colores [illegible] / [illegible] / medii [illegible]
[illegible] / [illegible] est / [illegible] possibile [illegible]
[illegible] rubeus / [illegible] apparent / [illegible]
color / [illegible] videtur ad lucem solis
[illegible] colores / et in luna [illegible] apparet [illegible] colorem et hoc est [illegible]
[illegible] reflexe videri [illegible] [illegible] / [illegible]
videri aliquid in luce solis / [illegible] hoc [illegible] videtur et solis
[illegible] videri [illegible] ut [illegible] luna [illegible] et hoc ultra [illegible]
[illegible] alias [illegible] est / et ad
[illegible] alias [illegible] dicit [illegible] stelle
[illegible] / [illegible] non [illegible] magnitudinis
[illegible] hoc [illegible] excedit descriptionem [illegible]
[illegible] coronam [illegible] dicta [illegible] volebat
ut non fuit tanta descriptio de stella [illegible] magnitudinis

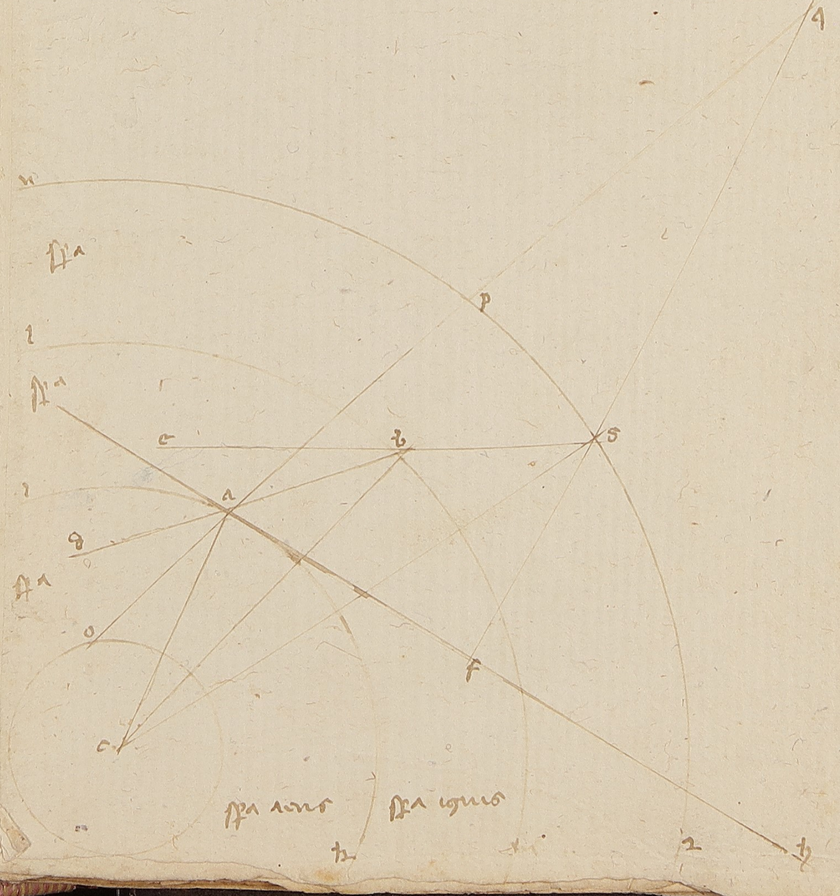
[illegible]

[illegible] est [illegible] comitis [illegible] ipsius loco
non est [illegible] magnitudinis et cum hoc stella [illegible] / inter quas
existit / et in eandem [illegible] vel imaginem [illegible] / est / et hoc
[illegible] non [illegible] dicta [illegible] / Et hec pauca dicta
sunt ad excitandum [illegible] invenimus in [illegible] nobilium et
[illegible] magnorum [illegible]
[illegible] universitatis parisiensis et [illegible] quod ad hoc [illegible] venerabilium
doctorum facultatem [illegible] / [illegible]
[illegible] margarita [illegible] doctrina / [illegible]
[illegible] tanto [illegible] splendidior [illegible] pulchra [illegible] / [illegible]
[illegible] aurea [illegible]. /

Explicit feliciter deo gratias

Et aliud [illegible] posset [illegible] / [illegible]
[illegible] de motibus planetarum forte possent salvari [illegible]
[illegible] ut [illegible]
[illegible] est / [illegible] regulares et irregulares / et [illegible] magnitudinis [illegible]
[illegible] et [illegible] directionis [illegible] planetarum
et [illegible] / et non videtur [illegible]
[illegible] vel refractio [illegible] est [illegible]
[illegible] / [illegible]
[illegible] methaurorum [illegible] naturam [illegible]
[illegible] / [illegible] et forte [illegible]
[illegible] / [illegible] ordinatum [illegible]
[illegible] ut [illegible] aut [illegible]
[illegible] variabiles [illegible] / [illegible]
est / [illegible] cometa [illegible] est [illegible] / [illegible] et in loco [illegible] aere [illegible]
[illegible] et [illegible] est / [illegible] et
forte [illegible] ordinationem [illegible]
[illegible] forsitan est adhuc [illegible]
celo [illegible] influentia [illegible] / et [illegible]
[illegible] celo [illegible] ordine / [illegible]
et [illegible] et accidentibus planetis ad [illegible]
[illegible] / forte [illegible]
[illegible] / hoc tamen non [illegible] est [illegible]
[illegible]
[illegible]. /

[illegible] q(uia) si stella sup(er) [illegible] loco . no(n) e(st) [illegible]
[illegible] Et cu(m) hoc stella no(n) videt(ur) [illegible]
[illegible]
[illegible] Explicit [illegible] de visione
stellarum tractatus brevis.



q[uestio] Queritur primo utrum tota perspectiva consideret de linea visuali.
Videtur quod non, aliqua pars perspective considerat compositionem oculi et partium
eius, quarto tertia quia compositio oculi et partium eius non est linea visualis,
ergo patet primo. 2o aliqua pars perspective considerat de multiplicatione
luminis et eius reflexione quarti tertii manifeste patet quia multiplicatio
luminis et eius reflexio non est linea visualis. 3o si sic perspectiva
non esset sciencia vera nec certa; consequens est falsum quia ipsa connumeratur inter mathematicas,
2o physicorum mathematice sunt certissime; consequentia patet quia linea
visualis non est nisi secundum imaginationem et per consequens sciencia que consideraret de
ipsa secundum passiones accidentales et dicere esset sciencia falsa, nam dicit
[illegible] in isto primo quod dicere radios [illegible] et omnes mathematici
dicentes esse radios non utuntur nisi lineis imaginariis tamen vocant
eas lineas radiales. Oppositum patet prius 2o physicorum. Videndum est
in generali de quibus perspectiva considerat; 2o qualiter differt ab aliis mathematicis
et quantum [illegible] adiungas. Primum est sciendum quod perspectiva
principaliter considerat passiones visus quemadmodum videndi et
passiones et potentias modis videndi et sic de aliis considerat.
Hoc facit in ordine ad visum; non dicitur quod considerat de linea in opposito
ad visum vel de linea visuali seu radiosa; non si queratur quid
est subiectum in ista sciencia dicendum quod linea visualis. 2o nota quod triplex
modus videndi quo visibilia videntur, quandoque simpliciter per lineas
rectas, aliquando per lineas reflexas a corporibus politis, aliquando
visibilia videntur per refractionem per diafana diversas dispositionis.
Primus modus dividitur quia aliqua visibilia videntur et apprehenduntur
solo sensu visus sicut solum videntur luces et colores; alia non
apprehenduntur solo sensu visus sed mediante virtute distinctiva sicut
figura, magnitudo, corporeitas, motus, quies; alia apprehenduntur
per visum mediante discursu ut quantitas [illegible] imaginationis et [illegible] et
indifferentibus [illegible]. Visibilia que videntur per reflexionem dividuntur simpli-
citer [illegible] quam [illegible] ab aliis fit reflexio
a corporibus planis, 2o a convexis speculis columpnaribus vel
piramidalibus, aliis a concavis speculis columpnaribus vel pira-
midalibus. Quartus modus [illegible] quod alius visus est in medio
variorum [illegible] visibilis [illegible] in dispositione. Et si queratur quare de obiectis
aliorum sensuum non fuerit facta sciencia ut fuit perspectiva de visu,
dicendum quod hoc fuit propter nobilitatem et certitudinem visus super alios
sensus, vel dicendum quod hoc fuit quia obiecta aliorum sensuum non multiplicantur
nec refranguntur [illegible] sicut faciunt obiecta visus. Pro 2a est sciendum
quod 6 sunt sciencie mathematice scilicet arismetica, geometria, musica, astrologia
et perspectiva, que differt ab aliis quod visus in prima [illegible]. 2o sciendum quod ordo
ipsius ad alias mathematicas est iste quia arismetica [illegible] et geometria

ordinis divine ista producuntur, sed astrologi et multa ista ponunt
et tunc est 9o quod mathematicus [illegible] perspectivus considerat de linea visuali
apud descendendo per passionem ipsius et 2o quod si aliqui alia alia
aspectus consideret hoc est in ordine ad lineam visualem quod corporum
celi quod corporum celi consideret magis in notitiam modos videndi
et sic de aliis et [illegible] ratione, aliqui [illegible] quod tunc verum
sicut clarius magister modos videndi et ad 2m aliqua
et tunc gradus et ista possunt esse linee visuales vel dico quod perspectivus
considerat multiplicationem et reflexionem lineas ut per hoc clarius
videtur multiplicatio et reflexio linee visualis habetur et ad
3m non sed et in nostro adversionem quod linea visualis non est
nostro adversionem dico quod Alhazen loquitur quod ponendo radios
exire ab oculis.

Secundo queritur utrum lux et colores in lumine agant in
visum. Videtur quod non, quia si in esset vel hoc, sufficeret
lux que est in corpore lucido, que est in medio, vel que est in visu;
non que in corpore lucido quia illa que illa non est in medio visum
nec agens et passum debent esse in medio; nec que in medio eadem ratione;
nec que est in visu quia illa est res apta, eadem ratione per argumentum
de colore. 2o si sic vel agerent aliquid vel non; si aliquid
vel partem vel actum; non partem ut notum est, nec accidens quia non
est permanens nec passionem. 3o vel res apta semper maneret
in visu vel aliquid generaretur; non primum, dato primum quod tunc visus
esset plenus talium actionum; nec 2m quia non apparet a quo illa res
generaretur. Oppositum: hoc maxime visus [illegible] agunt in visum,
sed hoc non quod [illegible] patet quod non videtur aliquid nisi quod agant in
visum, unde patet quod ista est causa effectiva visionis sicut communiter
aliud cognitum. Dico quod dicit Alhazen in primo capitulo et primo videndum
est quid sit lux, quid color et quot modis capiatur; 2o utrum
agant in oculum aliquid et [illegible]; 3o posito quod aliquid agant [illegible]
[illegible] actio ponit in visum duraret, quo ponuntur conclusiones
et [illegible] sunt. Quantum ad primum est sciendum ut dicit ipso
quod [illegible] Vitellione 2 [illegible] perspectivi quod corporis lucidi [illegible]
omne circumquaque est sui lucis diffusivum. 2o sciendum quod lux
primo dicitur qualitas in corpore lucido mediante qua lucidum illuminat
et videtur in corpore lucido, sicut stelle illuminant et videntur, [illegible]
in [illegible] ipso non videtur [illegible] quod videntur in aliis corporibus [illegible]
ut non color quod est lux sed aliquando lux capitur pro qualitate
acta in corpore diaphano a corpore lucido mediante [illegible] exeunte,

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in ipso et in ipso per ipsum [illegible] radiis lucis diffusio per medium
vocatur lux, sed lumen proprie capiendo est aliud quia 2o capitur ut
aliquid capitur lumen quantumque in claritate corporis lucidi, sed splendor
proprie dicitur claritas in corpore diaphano quod non [illegible] a corpore
lucido secundum lineam rectam sed per refractiones sicut [illegible] est in
splendore solis et non lumen nec lux [illegible] fulgor dicitur claritas
corporum non lucidorum ut sunt quidam lapides [illegible]
[illegible] et [illegible] solum [illegible] et [illegible]
proprie dicitur lucida. 2o sciendum ut dicit Vitello ubi primo quod
lux primo dicitur illa que effert lucem 2m sicut radii [illegible]
quod [illegible] illa est in qua est radii [illegible] dicere a sole
dicitur [illegible] illuminata luce prima et anguli [illegible] talis non
[illegible] sicut illuminata luce 2a [illegible] de linea lucis. 3o
sciendum quod aliqui dixerunt corpus lucidum [illegible] de novo agere
in diaphano quod dicitur lumen, immo dixerunt quod lucidum [illegible]
diaphanum [illegible] absque aliqua re de novo
genita et ad hoc [illegible] adducunt multas rationes, quod si lumen
esset aliqua res de novo genita in aere [illegible] lucidi
vel aeris [illegible] simul [illegible] generaretur
et simul generaretur quod [illegible] esset [illegible] dato
ex quo [illegible] lucidum est simul [illegible]. 2o arguitur quod aliqua
res permanens non duraret [illegible] solum [illegible] quod [illegible]
[illegible] quia patet quod [illegible] lumen est permanens natura
in motu [illegible] lucido cessante vel [illegible] duraret per
[illegible] sed [illegible] solum instans. 3o arguitur quod forma [illegible]
ageretur subito [illegible] est quod non esset [illegible]
gradualis et non gradualis [illegible] patet quod lumen est [illegible]
dualis et tamen subito [illegible] lumen [illegible] subito acquiritur.
4o si sic vel ageretur subito vel successive, non subito quia
[illegible] ageretur subito quod [illegible] lumen [illegible] causam [illegible]
[illegible] effectivam talis [illegible] subito [illegible] quod subito
ageret, consequens reputat Alhazen [illegible]
[illegible] per quod [illegible] est proportio [illegible] actio ad [illegible] talis
[illegible] ad agens, nec successive quia in medio [illegible] est recipere
[illegible] successione et patet Vitello 2o, consequens [illegible] dicit quod lumen
non [illegible] motu in instanti [illegible] differentia
[illegible] quia [illegible] posset [illegible] non ponendo tale lumen in
medio sicut ponendo tale lumen non est ponendum sed sic est quod [illegible]

et dicunt isti quod propter ponere vel non ponere lumen non diversificantur
consideraciones perspectivorum nam perspectivus supponit, ut lucidum per medium
diaphanum vel diaphanum appareat aliud per aliquam viam vel per diversa
tenendo istam opinionem quod lumen non est alia qualitas, acta a lucido
sed ad hoc ut lucidum appareat, illuminatum supponit contra itali[illegible]
situm, coloris lucidi, secundo patet dicit quod sive ponatur lumen res de
novo apta, sive non, diversificatur consideracio perspectivorum — Propter opinionem
aliam dicendum est, quod lumen est una qualitas de novo a quanta in coloris
lucido, ad racionem opposita [illegible] quod prima [illegible] 9a 29b
[illegible] act effective [illegible] nego quod non est maior difficultas
talia [illegible] producat propter unum solum et ad alia alia res permanens
duraret, [illegible] 9c ad istum dicitur quod alie res nota diu
permanent durare [illegible] ad physicum dicitur physicus dicit quod
quod ipse loquitur de permanentibus que non dependent [illegible] post primum
[illegible] — ad 3m solet graduales [illegible] adinpere [illegible]
quod non [illegible] graduales quod successive agit — [illegible] vel
[illegible] vel successive [illegible] fieri, [illegible] dicitur quod [illegible] longinquius
[illegible] agent [illegible] // ad 4m [illegible] maior [illegible]
[illegible] maior nec propter ~~[illegible]~~ [illegible] producere
quod aliquid [illegible], quod [illegible] est quod lux [illegible] [illegible]
[illegible], quod [illegible], [illegible] 3m dicitur quod color est lux
[illegible] mixtus [illegible] 2o [illegible] albedinis
[illegible] color generatur ex permixtione
lucidi, cum opaco [illegible] quod lux [illegible]
coloris, non color [illegible] una qualitas simplex non est ad
[illegible] lux [illegible] — alii dicunt quod color est quedam
qualitas [illegible] a luce [illegible] quod lux [illegible] effective ad generationem
[illegible] coloris sed lux et color sunt qualitates [illegible]
[illegible] magnitudine [illegible] perspectivum quod omnis color [illegible] aliquid
lucidi — 2o notandum quod quedam sunt colores fixi qui sunt in corporibus
[illegible] — non dependunt in [illegible] a suo [illegible] — alii sunt
mixtos, non [illegible] diaphanis, dependunt [illegible]
non fixi sed [illegible] colores yridis, halo, [illegible] —
— [illegible] est [illegible] quod lucis [illegible] colores [illegible]
albedinis [illegible] ista diu apparebat [illegible]
[illegible] albedinis ut experiencia [illegible] non sed quod
[illegible] nec propter augmentum vel [illegible]
albedinis [illegible] quanto [illegible] quod lucis [illegible]
illuminata agunt in visum sed quedam qualitates [illegible] quod lux in visum agit
lumen vel [illegible] et magis [illegible] quod [illegible] lumen [illegible] lucidi,

et color illuminatus agit in visum colorem vel [illegible] et magis
in magnitudine quod [illegible] color [illegible] colore 2o. [illegible] non
[illegible] diaphano [illegible] aliquid [illegible] vel
non perspectivus supponit ut [illegible] post [illegible]
[illegible] — [illegible] 3m notandum quod accidencium quedam sunt [illegible]
qui a [illegible] dependunt, [illegible] a suo [illegible] albedo
que est in [illegible], calor, [illegible] alia sunt accidentia, que non solum
dependunt [illegible] a suo [illegible] sed a suo efficiente sicut
lumen in aere non solum dependet [illegible] ab aere sed
a lucido, alia sunt accidentia, que ablato efficiente conservantur non
[illegible] corrumpuntur [illegible] post [illegible]
tendendo ad [illegible] talia sunt lumen, colores in visu generati
et [illegible] sunt [illegible] et [illegible], [illegible]
non videtur ista, amoto [illegible] efficiente non [illegible]
[illegible] sed propter [illegible] durare [illegible] tendendo ad [illegible] de
quod actiones luminum, colorum illuminatorum possunt in visu durare
propter [illegible] est [illegible] actu [illegible]
[illegible] non possunt vel alii ista durent, propter horam vel multo
[illegible] possunt [illegible] per duos dies vel multo plus, sed
[illegible], non durat in aere [illegible] dubitando [illegible]
[illegible] 9a 29b quod oculus est [illegible] aliqualiter [illegible]
[illegible] per actionem [illegible] quam aer non [illegible] oculo
est [illegible] potencia [illegible] actionum propter [illegible]
[illegible] non est in aere — Experiencia [illegible] a quo [illegible]
[illegible] res [illegible] in oculo [illegible] corrumpuntur sed [illegible]
[illegible] paulatim tendunt ad non esse — [illegible] 47
est [illegible] quia [illegible] quod lux operatur in visu [illegible]
[illegible] aliquid diu [illegible] solem oculus [illegible]
[illegible] nocumentum non poterit, [illegible] diu [illegible]
non [illegible] lux agit in visu — 2o [illegible]
[illegible] oculus [illegible] adquirit [illegible]
[illegible] non poterit diu [illegible] — 3o si aliquid diu [illegible]
[illegible] album ut in nive [illegible] lux [illegible],
[illegible] nocumentum [illegible] potest diu [illegible]
— 4o si aliquid diu [illegible] diu [illegible] in loco
[illegible] vel [illegible], in illo loco — 5o si [illegible]
diu [illegible], [illegible] album [illegible] illuminatum [illegible]

dum [illegible] in spacio obscuro et ad quem aperitur [illegible] ubi lucis
et postea [illegible] claudebat oculum adhuc erat aperta illa lux et
cum illa et cum illa lux [illegible] non apparuisset in oculo apparet quod lux
operatur in visum et si aliquis inspexerat corpus multum album
illuminatum forti luce [illegible] et apparebat quod [illegible] si ab
exiens in domo in qua [illegible] vincentem fortem dum inspexerat album
in clarum [illegible] dum [illegible] oculum suum ad locum obscurum et videbat
ut videbatur lucem fortem et fortem et quod colores illuminati aperti
in visum quod si ab dum inspexit viridem [illegible] multis [illegible]
dum vertebat visum suum ad locum obscurum adhuc et apparebat ut
videbatur [illegible] et si in illo loco obscuro [illegible] si inspexerat
et aperta viridia et si claudebat oculum adhuc in oculo aperta
viriditas et de aliis coloribus fortem [illegible] ut si [illegible]
dum inspexerat rubeum [illegible] apparuit in illuminatis [illegible] fortem
et erat aperta apparebat [illegible] viriditas [illegible]
et quod [illegible] dum inspexerat [illegible] et claudendo oculum et aperiendo
in oculo quod est quod ipse videbat [illegible] dubitatur quia dum
inspexerat colorem [illegible] fortem illuminatum et claudebat
oculum quod ipse videbat ad [illegible] quod ipse videbat lucem [illegible]
tunica cornea et [illegible] oculi quando [illegible]
lucem [illegible] in absentia lucis [illegible] et [illegible] quod ipse
videbat palpebra [illegible] palpebra aperta et illuminata [illegible] lucem
[illegible] visum et palpebra et ista est causa quare post
inspectionem fortem non videbat lucem [illegible] quod [illegible]
[illegible] remanet in luminari [illegible] quod [illegible] dum inspexit
corpus multum [illegible] vel album fortiter illuminatum postea album
visibilia non apparet et hoc accidit [illegible] quod lux fortis
[illegible] illuminari non [illegible] visibilia videbantur et si
[illegible] quod non videbat palpebra [illegible] claudendo oculum inspexit
magnam lucem ut post dicitur quod est quod [illegible] inspexerunt magnam
lucem [illegible] non sunt illuminati [illegible] ut possit
fieri visio sed post inspectionem fortis lucis remanet [illegible]
[illegible] illuminati ad [illegible] quod post inspectionem coloris [illegible]
fortem illuminatum [illegible] obscurat corpus album [illegible] apparet et
coloratum colore [illegible] inspecto [illegible] videbat [illegible]
corpus album [illegible] colore [illegible] inspecto quod [illegible]
oculi [illegible] vel colorem [illegible] apparebat et viridis
vel talis [illegible] colore [illegible] inspecto et quia [illegible] claudit oculum

post inspectionem talium colorum dico quod ipse videbat palpebram
quia [illegible] colorata colore [illegible] inspecto [illegible] quod [illegible] dicas
quare [illegible] non videtur [illegible] non videtur palpebra [illegible] aliis [illegible]
[illegible] quod [illegible] non sunt sufficienter illuminati [illegible]
quod si tela cornea vel aliqua [illegible] oculi esset colorata [illegible]
rubeo [illegible] apparerent rubea [illegible] viridi viridia et sic
de aliis coloribus et [illegible] quod [illegible]
est alio colore et [illegible] oculorum omnia
apparent glauca. 2º sequitur quod posset esse [illegible] visus
[illegible] iudicare et [illegible] falso iudicaret quod si omnis
[illegible] cornea esset viridis omnia visa [illegible] iudicarentur
viridia [illegible] falso iudicarentur. 3º quod tela cornea
et [illegible] oculi non [illegible] nec [illegible] colore quod
[illegible] visa mediantibus [illegible] colorata [illegible]
colore et [illegible] illa luce. [illegible] vel lux quae est
[illegible] quod lux quae est in [illegible] lucem [illegible]
[illegible] ad 2 dico quod [illegible] vel [illegible]
vel [illegible] quod [illegible] aliquis [illegible]
[illegible]. ad 3 dico quod [illegible]
[illegible] et [illegible]
[illegible] ad 4 dico quod illa res [illegible] non est visio [illegible]
illa res [illegible] vel colores [illegible] colores [illegible]
[illegible] 3º [illegible] visibilia [illegible] appareant visui
[illegible] lucis quod non quia visibilia [illegible]
[illegible] magnitudo [illegible] non [illegible] apparent [illegible]
lucis quia non visibilia [illegible] ut color et [illegible]
quia [illegible] visus indicat de visibilibus [illegible] ut de luce et
colore quia de visibilibus [illegible] non [illegible]
visibilia [illegible] quia non visibilia [illegible]
triangula vel quadrata [illegible] magna vel parva luce [illegible] apparet
[illegible] non [illegible] magnitudo [illegible] magna vel
parva luce [illegible] apparet maior vel minor. 2º [illegible]
[illegible] falsum est ut patet 2º [illegible]
quia [illegible] colores vel aliud visibile visum apparet aliquando
et [illegible] lucis apparet [illegible] apparet 2º
apparet [illegible] decipitur. 3º [illegible] aliquod
potest apparere albius albissimo et nigrius nigerrimo [illegible]
quod [illegible] videtur albissimum in [illegible] albissimum in luce [illegible]

videtur albissimum posito quod lux intendatur vel equalis maneat vel
minus album sit prius, sic est propter dispersionem lucis, non dispersio de
apparet albedo, sic albius fuit quia sic minus quam in luce debiliori, apparet
albius contrarium quod. — Item non videtur quod propter dispersionem visibile
appareat minus album immo contra videtur multo albius, eodem modo
videtur nigrum in separata luce [illegible] reflectatur appareat equaliter
vel magis vel minus nigrum, sic est quod propter disparationem lucis
non apparent colores dissimiliter sed nigrius fuit contrario sed
minus nigrum quam in luce fortiori apparet nigrius, contrarium fuit —
Item non videtur quod nigrum in luce fortiori appareat minus
nigrum immo semper magis — 4° sequitur quod nigrum possit apparere
album et album nigrum propter disparationem lucis, quod est contra experientiam
consequentia patet quia sic album videtur in aliqua luce, posito quod lux reflectatur
[illegible] vel minus album sit, postea apparebit, sicut propter disparationem
lucis albedo non dispersa apparet, sic minus album reflexa
luce, apparebit minus quam per eandem rationem et contra apparet albedo
per puncta que reflectantur contra ad reflexionem lucis. tandem
poterit apparere nigredo, eodem modo similiter quod nigredo possit
apparere alba intensa luce. — Item sequitur quod non possumus
accipere disparationem colorum in aliquo visibilium, falsum est
[illegible] sensum sed mediante ipsum visum, falsum est. in
quod non [illegible] mutatur, consequentia patet quia sic aliquod visibile appareret colore
proprio colorem in aliqua luce, in alia luce, vel apparebit similiter
[illegible] coloratum vel non sic patet quod propter disparationem non apparet
in visibilia dissimiliter sed non esset necessaria quo colorat
quod a certo sit aliud colorare vel illo quod in apparet in ista
luce vel illo, quod apparet alia ut sic collum columbe in
una luce apparet viride, in alia glaucum [illegible]
ut [illegible] per viride vel glaucum sicut videtur — Videtur
non apparet dissimiliter propter disparationem lucis, illuminantis
quod in tali visibilia consequens quod lux est prima principalis
visibile [illegible] apparet propter disparationem lucis illuminantis quod
nigrum [illegible] apparet album vel viride ut
aliud quam visus — opposita dicunt aliqui [illegible]
primo ponuntur distinctiones 2° conclusiones auctoris, et sunt
probationes, 3° [illegible] propter primum sciendum
quod visibilium quedam comprehenduntur a visu solo, sicut visus, et alia
sicut lux et colores [illegible] alia non comprehenduntur a visu solo

solo sensu sed cum mediante [illegible]
distinctiva et memorativa, vel alterius sensus sicut remoto
situs corporeitas, figura, magnitudo, continuitas, distinctio, separatio
numerus motus et quies, asperitas, lenitas, diafanitas, spissitudo
umbra, obscuritas, pulcritudo, turpitudo, consimilitudo, et dissimilitudo
— de primis visibilibus solum intelligatur questio — Item visibilium quedam
sicut lux et colores quedam videntur secundum lineam rectam et quedam
secundum lineas refractas vel reflexas, de primis solum intelligitur
questio — 2° sciendum quod visibilia apparere diversa propter dispersionem
lucis non est aliud quam mediante visu de visibilibus alterum et alterum
[illegible] propter aliam et aliam illuminationem — 3° nota quod lux potest
dispergi vel intendendo vel remittendo vel quod [illegible] per
diafana dissimiliter colorata — 4° nota quod aliqua lux
extenditur super visum et non super rem visam ut super medium
in [illegible] aliqua extenditur super rem visam et non super
visum ut super medium in [illegible] aliqua extenditur
super visum [illegible] visum et non super rem visam
aliquo modo quod super rem visam [illegible] medium [illegible] proximum et
non super visum aliqua super omnia ista extenditur eodem modo [illegible]
est de dispersione — de 2° est prima conclusio, quod ponit aliquas
luces fortes orientes super visum et super medium inter
visum et rem visam prohibent visum a comprehensione quorundam
visibilium quod videmus stellas de nocte et non de die et non est
disparatio nisi quod de die oculus est fortiter illuminatus et minus
[illegible] de nocte, [illegible] 2° quod si ponatur ignis [illegible] visum
nostrum, et alia visibilia [illegible] non videbuntur quod videbantur sicut [illegible]
ignis esset amotus — 2a conclusio est quod luces fortes orientes super
quedam visibilia illa visibilia occultant [illegible] non
[illegible] illuminat [illegible] videmus [illegible] in aliquo [illegible] sunt
[illegible] colores [illegible] et aliud [illegible]
[illegible] si ponatur in fortiori luce solis, illa [illegible]
[illegible] in luce debiliori comprehenduntur a visu
2° [illegible] sunt [illegible] fortiter
illuminantur non comprehenduntur a visu — 3° ignis debilis
in luce solis ut est flamma candele non comprehenditur
a visu, et tamen videtur in luce debili — 4° aliqui lapides
ut carbunculus et [illegible] lucent non apparent luce et tamen
in umbra apparent [illegible] — 3a conclusio
quod luces fortes orientes super quedam visibilia ipsa manifestant

q in luce debili non et apparent patet quia sepe in luce debili [illegible]
non apparent / similiter / gallus / [illegible] in luce forti [illegible]
in luce debili alii non [illegible] [illegible] = et 9° quia colores
corporum apparent / diversificatur propter diversitatem lucis orientis super
diversos colores quia fortes colores [illegible] ut color
[illegible] in luce forti apparet clara / et similiter in debili [illegible]
clarus et obscurus = 2° color alba [illegible] in forti luce apparet
albior et in debili minus alba = 3° color diafana / coloratus in forti
colore / ut [illegible] rubea in luce forti apparet rubea
clara / in debili [illegible] = 4° lapides diafani coloris
sunt diafani / in luce forti apparent clari et diafani in debili
autem obscuri et non diafani = 9° si lux debilis transeat
per diafanum coloratum ut per fenestram rubeam [illegible]
album oppositum super illud corpus / non apparet color illius diafani
[illegible] sola [illegible] obscuratus / et si per fenestram rubeam transeat
lux fortis / illud corpus oppositum [illegible] apparet rubeum
= [illegible] [illegible] et colla columbarum et pavonum [illegible]
in diversis horis diei / et diversis [illegible] apparent diversimode colorata
= [illegible] 3° est [illegible] quia [illegible] [illegible] lucem [illegible]
sunt per [illegible] [illegible] [illegible] propter [illegible] et [illegible] longe
albo in diversitate medii hoc impediat // 2° [illegible]
[illegible] non percipit / luce in [illegible] quia sibi apparet / [illegible] quia
lux vel lumen [illegible] / [illegible] = Exemplum [illegible]
[illegible] [illegible] oculus esset in loco / tenebroso et appareret celum
[illegible] videret stellas / de die sicut de nocte quia
oculus non esset [illegible] lumine illuminato quia sibi appareat
lumen stellarum / Exemplum apparet cum [illegible] non videntur stelle
quia de die oculus est illuminatus [illegible] quia non appareat lumen stellarum
= 2° apparet [illegible] [illegible] experientiis [illegible] et [illegible] profundis
videntur [illegible] de nocte / quia [illegible] oculus non est illuminatus lumine
[illegible] quia [illegible] appareat / lumen stellarum = 2 [illegible] [illegible]
[illegible] vel [illegible] illuminationes / medium oculo non [illegible]
vel magis illuminato / ut [illegible] non propter hoc diversificatur visio
[illegible] quia si visio diversificaretur non eodem modo apparerent stelle
[illegible] de die [illegible] et de nocte [illegible] experimentum docet oppositum
= 3° [illegible] quia [illegible] quod visio videat non [illegible] oculus esse
illuminatus [illegible] [illegible] [illegible] visibilis = 4° [illegible] [illegible]
[illegible] oculus esse / [illegible] lucis [illegible] de nocte [illegible] et [illegible]
[illegible] non esse aliquid [illegible] visum oculus non [illegible]

[illegible] [illegible] ipsum esse illuminatum patet quia [illegible] [illegible] lumen in loco [illegible]
illuminato quia esset [illegible] / [illegible] [illegible] posse esse visum [illegible]
tenebris in aere illuminato / patet in [illegible] [illegible] / quia ex se [illegible]
nullum [illegible] lumen = [illegible] [illegible] [illegible] esse a [illegible]
[illegible] medium esse lumen [illegible] nobile quia in oculo [illegible]
[illegible] / [illegible] esse illuminatum [illegible] quia non videret [illegible] //
[illegible] quia si oculo [illegible] lumen nullum [illegible]
videret / [illegible] lucis quia esset lux oculi ex quo apparet quia
posse esse aliquem [illegible] et in nulla esse facta [illegible]
[illegible] [illegible] [illegible] alia [illegible] in oculo patet quia si [illegible]
glaciales / vel [illegible] [illegible] aliquam [illegible] [illegible] [illegible]
[illegible] [illegible] apparet / oculo / oculo non posset videre = [illegible] quia
sol et alia astra essent colorata [illegible] non [illegible] [illegible]
patet quia [illegible] lux [illegible] non [illegible] quia color = 8° quia si
in medio essent imagines [illegible] / sicut [illegible]
[illegible] [illegible] nos non videremus [illegible] / [illegible] posse
[illegible] [illegible] nobis apparet albedo / [illegible] [illegible]
patet quia [illegible] [illegible] illuminata apparet [illegible] [illegible]
illuminatum [illegible] [illegible] oculo [illegible] apparere / albedo et albedo
[illegible] illuminata / et [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] appareret [illegible] [illegible]
posset apparere rubedo / vel viriditas [illegible] [illegible] albo
albedo posset [illegible] sola diversitate [illegible] et [illegible]
et [illegible] lucis / elongatione vel approximatione [illegible]
patet quia [illegible] [illegible] color [illegible] [illegible] [illegible]
[illegible] [illegible] / patet quia si [illegible] [illegible] elongatione / et [illegible]
lucis alium apparere [illegible] experimentum quia [illegible] apparet
viriditas vel rubedo / [illegible] [illegible] quia color medii
[illegible] diversitatem lucis [illegible] [illegible] videbitur esse [illegible]
[illegible] alius color medii ut rubeus [illegible] apparet [illegible] vel
albedo / [illegible] viriditas quia color medii = [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] apparent [illegible] / [illegible] [illegible] / [illegible] quia [illegible]
vel [illegible] / [illegible] apparet / [illegible] [illegible] apparet diversa
in [illegible] [illegible] = [illegible] de mundo [illegible] [illegible] [illegible]
et cum [illegible] quia lucis et colores [illegible] a visu / solo
[illegible] [illegible] / et alia / visibilia [illegible] [illegible] [illegible]
[illegible] = [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

tunicis et humoribus — Item quelibet superficies humoris glacialis est sperica / [illegible] cristallina non [illegible] dico ut cristallina — ad 4m humor albugineus [illegible] humor non est [illegible] colorem [illegible] ut in proposito — [illegible] quod [illegible] organum et superficies [illegible] sperice [illegible] ultima [illegible] tunicarum [illegible] plus quam 4or.

q Utrum visio fiat per piramidem cuius conus sit in centro oculi videntis et basis in superficie rei vise / arguitur quod non quia illa piramis [illegible] non esset quedam accidens / et si esset tunc per motum [illegible] inter visum et rem visam [illegible] piramides generarentur et corrumperentur [illegible] esset durativa [illegible] et non durativa [illegible] dare ultimum [illegible] Item [illegible] piramides [illegible] movetur vel si [illegible] movetur — 2o sequitur quod nos non possumus videre oculo [illegible] tenebris [illegible] illuminatam consequens est contra experientiam [illegible] 2o declaratur consequentia probatur quod illa piramis vel esset lux vel species obiecti / si lux non perveniret usque ad visum [illegible] quia visus ponitur esse in tenebris [illegible] species visibilis [illegible] non multiplicatur [illegible] per medium illuminatum ut volunt philosophi [illegible] 2o declaratur non potest pervenire usque ad visum [illegible] conus [illegible] non videtur [illegible] visus — 3o vel esset causata a visu vel ab obiecto / non a visu quia visio fieret extramittendo [illegible] oppositum [illegible] ab obiecto quia tunc obiectum esset nobilius visu / quia agens nobilius est [illegible] visio — 4o [illegible] visus / est [illegible] non sit [illegible] obliquus est [illegible] piramidis [illegible] — 5o si [illegible] unius linee vel unius plane superficiei [illegible] caderet / super oculum [illegible] videret [illegible] linea vel superficie [illegible] opposita et tamen talis visio non fieret / per talem piramidem — 6o [illegible] visio non possit fieri [illegible] recto / [illegible] facta est [illegible] foramen [illegible] valde parvum et [illegible] visus / [illegible] ab illo foramine [illegible] non [illegible] foramen usque ad [illegible] visus, conus piramidis, rectangule vel [illegible] — [illegible] visio [illegible] est [illegible] non fit per talem piramidem [illegible] non fit per talem piramidem [illegible] non fiet per [illegible] — oppositum dicit alhasen [illegible] / 2o ponentur [illegible] movebuntur dubia / [illegible] quod visio [illegible] proportionata [illegible] / [illegible] visus / 2o [illegible] proportionata [illegible] oculo // 3o [illegible] visus / 2o dicta — 2o notandum quod piramis quedam

est / rotunda / quedam laterata / rotunda [illegible] abenclid [illegible] geometrie [illegible] piramis rotunda est figura solida [illegible] corporea [illegible] trianguli rectanguli [illegible] latere [illegible] angulum [illegible] fixo [illegible] ad locum [illegible] triangulo dicto [illegible] rectangulus piramidem [illegible] / latus fixum [illegible] equalis et [illegible] rectangula / 2o [illegible] acuta piramis [illegible] longior [illegible] angula — 3o [illegible] obtusa [illegible] obtusa angula — 4o [illegible] axis piramidis / axis [illegible] est [illegible] piramis laterata [illegible] piramis est laterata [illegible] superficies [illegible] ad unum [illegible] conus piramidis [illegible] linee / vel superficies [illegible] piramidis [illegible] piramidis / [illegible] superficies [illegible] superficies vel linee [illegible] / axis piramidis / [illegible] linea [illegible] a cono ad basim [illegible] — 3o non [illegible] visus / [illegible] duas [illegible] spere / [illegible] in proposito — 4o non quod [illegible] ad totam speram [illegible] spere [illegible] — 9o non quod [illegible] est [illegible] tota spera [illegible] visio non [illegible] visus / ut [illegible] in proposito [illegible] a [illegible] / [illegible] suppono quod in proposito [illegible] de visione [illegible] luminis et coloris / quod [illegible] fiat visio [illegible] visibilium [illegible] — 2o suppono quod vel differt [illegible] illa piramis [illegible] vel [illegible] per piramidem imaginatam in qua visio fiat / [illegible] piramidem imaginatam [illegible] — 3o suppono / quod si illa piramis [illegible] in proposito / non differet [illegible] per species visibiles / vel [illegible] visibilis [illegible] visibiles [illegible] per [illegible] videbitur in [illegible] 2o est [illegible] visibile quod [illegible] videtur [illegible] ut illuminata [illegible] 3o [illegible] visibilis [illegible] non [illegible] in posse [illegible] visibilia in [illegible] luces et colores [illegible] lux non potest videri [illegible] color non videtur [illegible] color [illegible] ut [illegible] ut videtur [illegible] color [illegible] / 2o ex experientia / quod [illegible] colorata / posita in tenebris non [illegible] ad visum [illegible] ponatur [illegible] a visu [illegible] in tenebris latent visum / ex quo [illegible] quod visus / [illegible]

comprehendit in diversis vel in uno — 2° q° [illegible] videtur quod nulla
partium superficiei visus et aliqua partium superficiei visus, quia possunt lineas
rectas esse necesse ut res visa videatur — Ex quo patet solutio [illegible]
rei ad visum [illegible] ratione [illegible] quod videtur quod ~~[illegible]~~ obiecti visui
sit quod recte linee possunt a superficie visus ad superficiem ad superficiem
visus, [illegible] alias multas [illegible] quod sit visio et si non possunt
tales recte linee [illegible] non fit visio, [illegible] [illegible] non differt in proposito
[illegible] visio fiat per radios ab oculo egredientes vel alio modo
fiat, per egredientes [illegible] radios a superficie visus ad superficiem visus
possunt [illegible] radii recti — 2° in proposito, sufficiunt linee recte
imaginarie [illegible] quod recta linea imaginaria sit, a superficie visus
ad superficiem visus, ad hoc quod fiat visio — 3a q° est 13a videtur 3a
quod visus non comprehendit res visas, in [illegible] medio diafano [illegible]
[illegible] quod res visa debet esse in [illegible] vel in [illegible], [illegible] visus
et res visa esse alicubi [illegible] [illegible] sit res [illegible] non
[illegible] [illegible] [illegible] oculo [illegible] non [illegible] [illegible] ut [illegible]
non debet esse, [illegible] et [illegible] vel [illegible] vel [illegible]
[illegible], [illegible] medium diafanum [illegible] non debet [illegible]
visio alicui [illegible] [illegible] quod [illegible] visum et res visas non
est diafanum, non est visio, [illegible] est visio alias [illegible]
— 4a q° est 14a q° quod non fit visio visibili [illegible]
diafano, [illegible] [illegible] quod [illegible] fit [illegible] diafano [illegible]
[illegible] ut visus, ~~[illegible]~~ [illegible] medium
visibile ut [illegible] quod visio [illegible] ad visibile [illegible]
[illegible] [illegible] esse debite dispositus — 5a q° que est 15a videtur
quod nullo visibili [illegible] superficie necesse est, [illegible] immediata [illegible]
[illegible] necesse est, esse corpus diafanum [illegible]
in [illegible] [illegible] visibile visus non [illegible] visibile [illegible]
[illegible] [illegible] linea [illegible] est [illegible], non diafana, et [illegible]
[illegible] [illegible] [illegible] et [illegible] visus, [illegible] — 6a q°
[illegible] formandis visibilibus distantia visus fit [illegible]
[illegible] [illegible] [illegible] est [illegible] visus, [illegible] superficie
visus, ex quo sequitur quod omne quod videtur [illegible] videtur
— 2° [illegible] nulla [illegible] visus et aliqua partium superficiei visus, possunt
[illegible] rectas lineas esse necesse ut ~~res visa~~ res visa videatur
[illegible] recte linee imaginarie, nulla partium superficiei
visus [illegible] superficiei oculi [illegible] cadere [illegible] ~~[illegible]~~
superficie oculi. [illegible] [illegible] visio necesse est, [illegible]
lineas [illegible], [illegible] visus, et [illegible] [illegible] visibilibus,

[illegible] est, superficies visus, [illegible] quod [illegible] [illegible]
[illegible], [illegible] [illegible] [illegible] quo fit visio — alia q° quod visio non fit
[illegible] dolores et passiones ex quo sequitur quod res visa esse [illegible] disposita
[illegible] ut [illegible] quod [illegible] capitulo [illegible]
quod lucis et coloris [illegible] agunt in visum et fit visio, [illegible] lux vel
coloris [illegible] [illegible], [illegible] ~~[illegible]~~ [illegible] [illegible]
experiencia [illegible] est obiectum visibile [illegible] delectabile [illegible]
[illegible] oculo [illegible] [illegible] debent [illegible]
[illegible] [illegible], [illegible] delectatur [illegible] oculo [illegible]
[illegible] quod [illegible] visionem [illegible], oculus vel
[illegible] [illegible] — [illegible] quod ex q° visio non fit absque
passione et dolore in oculo sit sufficienter dispositus [illegible]
non [illegible] [illegible] visionem — 8a q° quod [illegible]
[illegible] distantia visio fit solum [illegible] comprehendit lineas [illegible]
[illegible] ad oculum superficie [illegible] — ex q° [illegible] quod [illegible] res visa
[illegible] vel imaginaria sit ordinata ~~[illegible]~~ in superficie visus,
ut in superficie visus, [illegible] q° [illegible] [illegible] visio fit [illegible]
[illegible] [illegible] est [illegible] visus, [illegible] distantia visio solum fit [illegible]
comprehendit [illegible] superficie visus, [illegible] q°, quod nulla linea [illegible]
[illegible] [illegible] in [illegible] [illegible], [illegible] quod linee
comprehendit [illegible] a superficie visus [illegible] superficie visus, [illegible]
[illegible], ordinatur in superficie visus, [illegible] ordinare in superficie
~~[illegible]~~ visus [illegible] et imaginandum est de oculo nostro, ut [illegible]
[illegible] [illegible] quod forma superficiei [illegible] ordinatur ut in
superficie visus vel [illegible] ~~[illegible]~~ formarum, [illegible] imaginandum quod recte
linee a punctis rei obiecte [illegible] [illegible] [illegible] ut oculo
[illegible] comprehenduntur [illegible] superficie [illegible] et [illegible]
[illegible] et sic fiet forma in superficie [illegible] ordinata quo
ordinatur in superficie visus, [illegible] imaginandum [illegible] formarum visus ordinatam
in superficie oculi [illegible] [illegible] [illegible] [illegible]
[illegible] per oculos nostros — 9a q°, quod omne visibile [illegible]
[illegible], alias [illegible], [illegible] superficiei visus, ad hoc ut
[illegible] videatur [illegible] quod [illegible] [illegible] formas in
superficie oculi sic ordinate ut est ordinata in superficie visus
[illegible] in visibile [illegible] [illegible], ~~[illegible]~~ superficies visus
[illegible] in proporcione ~~[illegible]~~ [illegible], vel [illegible] non posset
forma [illegible] ordinate in superficie visus, ut in superficie visus
10a q°, quod visio non completur [illegible] ordinate forme recepta
in superficie glacialis [illegible] ad nervum [illegible] quod [illegible] completur

visio/ intellectualis cum ipsa componere ad utrumque duos motus una res
apparet 2o = 11. 9o/ quantum lineas pyramidis visualis/ necesse est
polos axium ~~[illegible]~~ terminatur per centrum foraminis uvee super superficiem
[illegible]

[illegible]

6 [illegible]

[illegible]

~~fiat~~ fiat in instanti = 3° ut patet ex parte obiectorum quia omnia
obiecta [illegible] = 3° omnia visibilia [illegible]
[illegible] cognoscendi [illegible]
[illegible] cognosci [illegible] capitulo 2° [illegible]
[illegible] visibilium non [illegible] modum [illegible]
[illegible] visionem [illegible] refractas vel
reflexas = [illegible] actum [illegible]
[illegible] visiva [illegible] = 2° quod obiecta
[illegible] actu [illegible] cognoscit = 3° quod [illegible] actum
[illegible] = 4° quod [illegible]
= 5° quod omnia obiecta visibilia [illegible]
= 6° quod obiecta [illegible] alia obiecta [illegible]

[illegible]

~~fiat~~ fiat in instanti = 3° dicitur patet ex parte obiectorum quia in visu
obiecta excellentia agunt, sicut patet = 3° omnia visibilia et est sic
extra mediocritatem cognoscuntur, quia dicitur quod extra mediocritatem cognoscuntur visus
est extra cognoscere [illegible] patet = oppositum dicit alacen capitulo 2° [illegible]
[illegible] dicit, quod comprehensio omnium visibilium non est per unum modum [illegible]
comprehensio, [illegible] est solo sensu, [illegible] quod hic solum [illegible]
de visione quae fit per lineas rectas et non per refractas vel per
reflexas = [illegible] conclusiones videtur primo [illegible] actus [illegible] requiritur
ad cognitionem [illegible] mediante visu [illegible] = 2° quod obiecta [illegible]
[illegible] per alios actus [illegible] actus cognoscuntur = 3° quod colores [illegible]
[illegible] [illegible] = 4° quod [illegible] [illegible]
= 5° quod [illegible] obiecta visibilium [illegible] quod [illegible] comprehenduntur
= 6° quod obiecta [illegible] per alia obiecta videntur = [illegible]
[illegible] actus [illegible] ad cognitionem [illegible] mediante visu
[illegible] est, actus [illegible] visus, [illegible] = 2° est [illegible]
memorie, [illegible] [illegible] [illegible] est actus [illegible]
[illegible] et argumentationis et [illegible] a [illegible] [illegible]
= [illegible] fit [illegible] solo sensu visus // 2° mediante cognitionem [illegible]
= 3° mediante [illegible] [illegible] non [illegible] et argumentationis [illegible]
[illegible] [illegible] visus = Ex istis primo [illegible] quod est, [illegible] visibilium
[illegible] [illegible] quod omnis visio fit vel per [illegible] idea
vel [illegible] [illegible] et hic loquor de visione [illegible]
primo modo videndi, [illegible] possumus extendere ad alios duos videndi
[illegible] quod omnis visio vel fit [illegible] quod actus videndi [illegible] simplex [illegible]
[illegible] visum vel fit per [illegible] [illegible] [illegible]
ista visio dicitur [illegible] apprehensio simplex [illegible] [illegible]
[illegible] apprehensio simplex [illegible] actum [illegible] simpliciter [illegible]
[illegible] [illegible] visus = [illegible] actum quo visus [illegible]
[illegible] [illegible] [illegible] [illegible] simplex receptio
non [illegible] = 2° [illegible] est [illegible] 3° dicitur quod apprehensio simplex
fit [illegible] [illegible] [illegible] solum [illegible] fit [illegible] solum [illegible]
[illegible] axis [illegible] radialis, [illegible] fit [illegible]
[illegible] de re visa et [illegible] ~~[illegible]~~, [illegible]
[illegible] axis [illegible] ~~[illegible]~~ radialis = 3° [illegible] est [illegible] dicitur
3° quod omne visibile aut comprehenditur a visu solo simpliciter aut [illegible]
[illegible] = 4° [illegible] est [illegible] dicitur [illegible]
[illegible] [illegible] [illegible] [illegible] ~~[illegible]~~ [illegible]
[illegible] [illegible] visus [illegible] cognoscendi [illegible] dicitur
[illegible] quod [illegible] [illegible] [illegible] [illegible] alio [illegible]

simul et instanti [illegible] [illegible] [illegible] [illegible] quod hoc fiat [illegible]
difficultate et labore = 8° [illegible] est [illegible] [illegible] [illegible] et
et in non [illegible] [illegible] et [illegible]
~~[illegible]~~ [illegible] simul [illegible] visus [illegible] possit [illegible]
[illegible] argumentatio et [illegible] obiecta [illegible] [illegible]
ut [illegible] [illegible] eligat [illegible] ~~[illegible]~~ [illegible] [illegible] vel [illegible]
apparebit pulchrius, [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] electione
[illegible] omne quod est pulchrius et delectabilius, et omne quod est delecta-
bilius est eligendum, hoc est pulchrius, [illegible] quod hoc eligendum [illegible]
experientia patet quod [illegible] ~~[illegible]~~ obiectorum fit [illegible] [illegible]
in instanti [illegible] et quod [illegible] non est nata [illegible]
[illegible] et labore, et quod [illegible] ut patet de pueris, 9°
[illegible] colores [illegible] fit in tempore [illegible] comprehensio [illegible] colores [illegible]
fit [illegible] [illegible] fit in tempore [illegible] comprehensio [illegible]
[illegible] fit in tempore [illegible] colores visum [illegible]
[illegible] [illegible] non [illegible] cognoscere qualis color sit, patet [illegible]
[illegible] cognoscat quis color est, [illegible] patet ex [illegible] parte
= 10° [illegible] visibilis ~~[illegible]~~ ~~[illegible]~~ comprehensio [illegible] ~~[illegible]~~ [illegible]
fit in tempore, [illegible] comprehensio [illegible] ~~[illegible]~~ [illegible] fit in tempore [illegible]
[illegible] aliorum visibilium [illegible] patet ex parte [illegible] [illegible]
= 11° [illegible] visus in [illegible] tempore comprehendit [illegible] [illegible]
et hoc est [illegible] dicitur 3° [illegible] quod colores a longe [illegible] visui
[illegible] cognoscit visus [illegible] colorem [illegible] cognoscat qualis color est
[illegible] videatur a longe [illegible] cognoscatur [illegible]
= 12° [illegible] est [illegible] [illegible] [illegible] dicitur [illegible] [illegible]
[illegible] [illegible] visus [illegible] in [illegible] tempore cognoscuntur [illegible]
visibilium non assuetorum [illegible] obiecta visum [illegible] [illegible]
vel ~~[illegible]~~ [illegible] [illegible] in [illegible] tempore cognoscere [illegible] [illegible]
[illegible] [illegible] vel [illegible] [illegible] = [illegible] non [illegible] vel [illegible] [illegible]
actus mediante visu, [illegible] [illegible] [illegible] vel [illegible] [illegible]
[illegible] [illegible] obiectorum = [illegible] cognitio certa
mediante visu solo sensu visus est [illegible] certa mediante
[illegible] [illegible] [illegible] [illegible] certa [illegible] [illegible]
[illegible] [illegible], notitia est [illegible] [illegible] in [illegible]
[illegible] [illegible] non [illegible] [illegible] [illegible]
[illegible] notitia certa mediante visu, solo sensu visus, [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
est [illegible] = [illegible] patet [illegible] hoc dicimus quod [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] ex [illegible] [illegible]
[illegible] cognoscendo quis color, est color qui [illegible] cognoscere
[illegible] colorem [illegible] cognoscendo quis color est [illegible] [illegible] est [illegible]
[illegible] solo sensu, [illegible] cognoscere [illegible] est, [illegible] cognoscere
[illegible] est = 2° [illegible] cognitio certa mediante visu, mediante notitia precedente.

est carentia illa q sequitur p coronatos et acquisitos p
sic prędens — 3a q° q est q̃a aliq̃s 34 p ... visus no p
cōpsidet una forcis rei vise p aspectu simplicē ut pz ex
prędent — q° 9° q 8a aliquis ... reperti plus frigidi ?
~~carens... forti ... possibilis ... ut remanentes p q qui una res~~
~~... sepal mag ... minus f ... imago ... rei — ultra 9° visio~~
~~... sequitur~~ ... post aliquantum ... p q aspectu
simplici ... ... no possunt carentis de forti extra
forte visi — 4a 9° sequitur ... p ... ops carentia ...
forti aspectu simplicē ut pz ex prędent — q 9° q 8a aliq̃s
... reperti plus frigidi ... forti ... possibilis ... an
remanentes p q qui una res videtur sepal mag ... minus
frigi ... imago illius rei — ultra 9° visio ... sequitur
prędent p modica ... no efficiat certa forte rei
... aliqs ... forte ... videtur p
comprehensionē ... respectu ... necessario ... sic sol
in modica ... res ... p ... q luces ... colores ... ad p
ut no — ... p sit p 9° p luces ... colores ... ad fi
... alio ... a visu comprehendi ut una illius p comprehendi
p ... ar luces ... colores ... a comprehendi a visu
a° p ...
aspectu simplicē ... comprehendi

Utrum lux multiplicetur per radios

Utrum lux multiplicetur p radios — ar q no q2 multiplicetur
p piramides q questio falsa q̃a q piramis no est
radius ... pz q lucidum ... piramides in quolibet puncto
medij — 2° si sic tunc lumen medij esset dispositum cu illi
radij essent indiuisibiles q in multitudine ... et sese interpretant ut
pz ... — 3° tunc ... esset ... q sic ... lumen
in linea radiali ... — 4° q eadem rō
qualibet alia ... sic p radios multiplicaretur q videtur falsus
modus agendi ... pz q ... ... de hoc ...
tunc — 5° q forte ... emitteret ... radios ...
representatiuos et actiuos sic forte accidentales q ... videtur
potentior ... multiplicare ... q
... q ... virtute est ... est ... — Oppositum
pz p omnes ... dubij ... aliquali ... radios
multiplicatos ... aliqua ... ppones secundum ordinem
quarum prima sit hec ... nullum elementorum debeat ... forte
lucem ... q lux corporum celestium est superior ...
inferiorum ... et omnes ... actuato et colorem ...
... esset elementis simpliciter ... — 2° si ignis esset ... — 2m
lucidus ... speram ... ... lux sit ...
... sic color ut pz in flamma ... secundum gradum ...
no ... lux ignis nec ... in illo medio inferiora
illuminaret et superiora videret ... approximando ...
... et ... ar ... flamme ... lux ...
q ... ignis ... flamme no est ... ignis ... cum
... lucem ... anima ... no ... forma ...
... lucem ... sic in nulla mixta forma ...
... vel ... cu ... simplicium ...
... esse ... q est ... — ... alia 9° ignis ... lucis
est productiuus ... sunt ... quidam lucida ... in inferioribus
ad directionem ... et utilitatem hominum ... no ...
necessarium ... ... no magis appropinquat sunt ...
maxime ... — 2° ... ignis est productiuum lucis ... —
ignis ... flamma ... secundum idem agens secundum idem passum
eodem ... effectus ... ignis ... calidi calores
lucis ... no ... lux ... sup ... consequenter
... forte ... ... celestia
... anima ... lucem ... ... adminus
... lucida ... ... approximando
— ... 9° lux celestium no est intensibilis et remissibilis pz
q no ... nec ... esset ... lumen
magis ... pz cu lumen no sit productum realis
lucis ... — 2° si realis luna sol lucem
superadderet ... remaneret cu luna ...

videatur obiectio quarta scilicet quod lux non definitur per rationem omnium specierum
lucis quia ~~[illegible]~~ respondetur ex presentia lucis et non aspectu solis // 3°
et sol quando [illegible] lucem in aspectu / facta patet quia [illegible] non apparent
[illegible] / quia cum [illegible] [illegible] = 4a quarto lux [illegible] [illegible]
[illegible] [illegible] apparet patet quia in inferioribus [illegible] est coloribus
simul cum coloribus [illegible] [illegible] quia non apparet [illegible] lux nisi
sole quia [illegible] [illegible] apparet [illegible] est [illegible] exalationibus coloratis
[illegible] super super simul movent visum lux et aliquis quia nunc color
[illegible] [illegible] et non apparet cum sole solo / non indicatur [illegible]
[illegible] = 4a quarto lux superiorum et inferiorum et [illegible] [illegible]
[illegible] [illegible] probatur quia lux solis producit lucem flamme quia [illegible] quarta
quia agens magis conatur [illegible] [illegible] producit [illegible]
= 2° quia movent visum et [illegible] [illegible] [illegible] apparentias quia
lux flamme per [illegible] [illegible] causat rubedinem sicut lux
solis / [illegible] quia [illegible] videtur [illegible] = 3° quia [illegible] omnis
apparentie per [illegible] [illegible] lucis salvatur quia superflue erunt [illegible]
patet quia / lucem non differre in [illegible] [illegible] et [illegible] [illegible]
[illegible] sicut et [illegible] // 2° [illegible] quod [illegible] apparentie colores
[illegible] [illegible] lucem oriuntur super ipsos [illegible] [illegible]
[illegible] variationes et non [illegible] [illegible] [illegible] lucem
= 3° [illegible] stellas [illegible] [illegible] lucem [illegible] influentiales activas
quia lux est calefactiva [illegible] [illegible] cum sit [illegible] lucem solis
quia quia [illegible] [illegible] [illegible] erunt [illegible] [illegible] [illegible]
influentiales [illegible] [illegible] = 4° [illegible] lapides lucentes sicut
carbunculus et alii et lignum vetus et squamas piscium et omnia
lucentia [illegible] esse calefactiva et [illegible] calida / = [illegible]
[illegible] lucentia / [illegible] [illegible] plus ignea / alio [illegible] quia ignis
maxime productivus [illegible] [illegible] 2° [illegible] lucis ut visum est = [illegible]
[illegible] esse quia tales lapides [illegible] lucem [illegible] [illegible] superiorum
[illegible] et alias [illegible] suas mirabiles quia ex natura et [illegible]
[illegible] non producuntur [illegible] quia [illegible] lapides et [illegible] et
inveniuntur [illegible] [illegible] ubi natura ignis / non videtur
producere [illegible] [illegible] [illegible] lucem [illegible] [illegible] apparentias patet ex 3a
[illegible] / lux in carbunculo sicut [illegible] apparet [illegible] ut lux flamme
[illegible] et lux [illegible] [illegible] alia [illegible] [illegible] [illegible]
[illegible] et [illegible] apparet per commixtionem talium lucentium
[illegible] coloribus et dubitatur an omnia [illegible] [illegible] lucem
[illegible] quia [illegible] / quia [illegible] / lignum et alia / cum omnia [illegible]
[illegible] / nam ignis / [illegible] [illegible] magis et minus nunc [illegible] ex
[illegible] quia omnia lucerent [illegible] per [illegible] lucis vel per

[illegible] [illegible] diaphoni [illegible] ad multiplicationem [illegible]
vel per [illegible] quia [illegible] [illegible] quia [illegible] quodammodo [illegible]
[illegible] // vel aliter [illegible] quia lignum non [illegible] et quia id
post [illegible] ~~[illegible]~~ [illegible] [illegible] non est lignum
[illegible] mixtum [illegible] [illegible] lux naturalis [illegible] sicut albedo
[illegible] / patet quarto quia lux [illegible] [illegible] [illegible] generatur sicut
et diaphanitas / consequenter non ut apparet [illegible] [illegible]
[illegible] quia est [illegible] lucis [illegible] duo suppono / primum est /
agens naturale [illegible] naturale [illegible] / vel attingit passum [illegible] effectus
permanentes patet quia tale non producit effectus suum in [illegible]
[illegible] [illegible] [illegible] effectus naturalis quia quod naturale producit
[illegible] [illegible] educatur / patet quia ex hoc [illegible] agens
[illegible] et naturale / ad [illegible] attingit per effectus [illegible]
[illegible] [illegible] [illegible] agens [illegible] naturale / [illegible] sicut
2m est / agens naturale / tangit suum passum modo [illegible]
[illegible] quanta [illegible] [illegible] / [illegible] passum / [illegible] quia [illegible] ut
[illegible] agens / [illegible] non [illegible] [illegible] passum distans / [illegible]
[illegible] / [illegible] agendi sicut [illegible] per [illegible] non
[illegible] / [illegible] [illegible] actionem quia attingit passum cum
[illegible] / 2° quia sic attingit passum est [illegible]
agentium naturalium sicut apparet [illegible] quia 9° = prima 9°
[illegible] [illegible] / [illegible] agens / primo attingit passum non
est [illegible] permanens [illegible] quia [illegible] agens naturale / [illegible]
[illegible] ad effectus permanentes [illegible] naturalis [illegible] [illegible]
[illegible] [illegible] [illegible] quia [illegible] naturale [illegible] agens [illegible]
[illegible] naturale esse [illegible] attingere [illegible] [illegible] [illegible]
videtur [illegible] / quia [illegible] [illegible] producatur [illegible]
accidentalis / permanens quia forma agens per naturale producit
[illegible] [illegible] per passum [illegible] [illegible] attingatur cum effectus [illegible]
[illegible] esse non sit [illegible] permanet [illegible] [illegible] passum
et [illegible] esse per [illegible] [illegible] non educatur [illegible]
vel [illegible] agens tale [illegible] [illegible] [illegible] [illegible]
[illegible] producit / et [illegible] producendo [illegible] [illegible] / non in
ad illud [illegible] [illegible] / [illegible] / [illegible] per [illegible]
[illegible] educitur [illegible] ut [illegible] producitur ut alie forme educuntur
[illegible] [illegible] permanentes / 2° ad [illegible] forma agens / suo
actu primo / attingit passum et ille actus non est forma
agens / quia [illegible] producit / ad [illegible] [illegible] [illegible] forma
permanentes producitur / = 2a [illegible] [illegible] patet quia forma [illegible]
[illegible] [illegible] non est [illegible] actus / quia [illegible] [illegible]
[illegible] / [illegible] patet [illegible] et [illegible] quia [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
actu [illegible] / et postea non / et [illegible] quia actus [illegible] passo [illegible]

A quo 2° ... producitur ... / ... qualitas realis ... et ... / ... passum ... agente

forma agentis non est primus actus // 3° quia virtutes sperme non
moventur agunt realiter / differentia albedo que ex pluribus illarum partium
congregatur secundum istas qualitates / illa non attingere // 4° si ille qualitates
particulares agendi essent ... cum agentibus qualitatibus ...
esset contineri albi et nigri simul ... albedinis
et nigredinis essent / consequenter ... oculi ... quod sicut
calidus ... ex quo ... quod forma naturalis agentis ... differentia

Contra

... realis ... naturale ... quod agens ... producat ...
existentia rationabile ... realiter ...
... ad ... / 2° ... quod ... esset
forma agentis / est ... / quod est illa res ... / 3°
quod agens ... producat ... / 4° ... quod omnes qualitates
sensibiles ... producunt ... differentes
albedo sicut lumen differens ... = 2ª ratio ... lucis et

2ª ratio

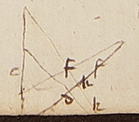
colores non sunt corporis realis ... producte ...
... quod aliquis albus ... videlicet / 2°
... parietes ... / ... ad ...
... lumen ... non producat realiter ... patet quod
et ... quod ... lucidum ... remaneret ...
lucidi quod lux realis / non evanesceret / ... lucidi
quod ... et non ... lucidum. — 3ª ratio ...

3ª ratio

... qualitatem ... realiter producere ... quod aliquis
non posset fieri ... nubibus / ... contrarius
calidi ... / ...
... non ... fieri ... realis / ... et
... calidi ... / ... et ...
... / ... non
...
... calidi ... producat ... sicut ...
... calidi ... / ...
... / ... et ... calefactivus ... calor
et ... / candela ... / ... vel ...
... calidi ... calidi ...
... flamma ... et ...
... calidi ... qualitates ... esse ...
... / ... agendi ... sunt actio ...
... naturales agendi ... / 2ª ... sunt

... per quas ... / ... sic ... sua ... obiecta // 4ª ratio lux colores et omnes qualitates / sensibiles multiplicant
aliquas virtutes suas radiales / vel ex radiationes / rectas / ... quia ...
agens / naturale / naturaliter est agere ... circumferentiam ...
hoc est ... convenientia ad productionem ... effectus ...
= 4ª ratio ... radiales multiplicantur ... hoc quod lucidum vel lux
... radij ... producat ... rectorem ...
quod aliquis ... esset ... / ...
notandum ... quod ... qualitas ... sicut ... unus
... productum ... non producat ...
posteriorem ... lux producat una post aliam ...
posteriores ... quod ... lucis ... lumen ...
non producat / quod lumen est ... successivum ... quod ... agens
... / ... agens ... et ... / volo tamen ... quod
... permanet ... sicut actum ...
non ... hoc ... successivus / fieret // ... radiales
multiplicationes lucis non sunt superficies ... lineas
quod aliquis ... multiplicatio ... fieret lumen ...
... radij ... / ... columnares / lineas ...
... radij ... multiplicari ... et
est columnares / vel pyramidales / vel ... pyramis / sicut
patet ... = ... negatur ... quod radij
... pyramidales ... / ... et ... duo tales possent
... non fieret ... duo
radij ... radij ... / ... et quod radios
... in medio ... / ... / ... duo
radij ... in medio
et ... duo ... / ... quantitatum ... et ... sic
esse non est ... quod ... et sicut ...
... est / ... est / ... lumen
ad ... quod hoc ... / ... nullo ...
et ... esset ... / ad 3ª
patet ... / ad 4ª ... sufficit ... proportio ...
... / ... lucis et colores / ... esset alia lux
et ... radios calidi ... / reflectendo / et
refrangendo et ... sicut ... / quod ...
radij non ... ad ...
... reflectuntur ... radij lucis ... et
reflexio ... / ...
qualitas ... ad ... vel ...
... non videatur ... cum ...
sicut radij lucis ... sicut ... non sufficit ...
... visuales ... proportio / ad 4ª ... quod ... non ...

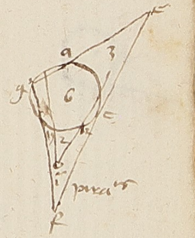
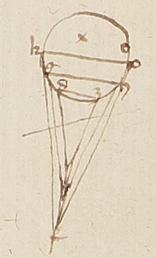
Responsio ad rationem

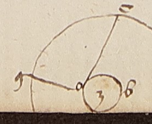


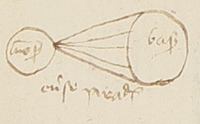
repugnat / [illegible] [illegible] [illegible] [illegible]
ad intellectus quasi [illegible] ad [illegible] [illegible] [illegible] / intellectum
[illegible] separatis obiectum [illegible] [illegible] / separata aequaliter [illegible]
[illegible] [illegible] [illegible] non [illegible] [illegible] [illegible] [illegible] [illegible]
intellectus sic separatus non videtur [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] obiectis
quomodo / obiectum intellectus [illegible] ad intellectum separatum [illegible] [illegible]
[illegible] [illegible] intellectus [illegible] obiectum sunt in [illegible] [illegible] [illegible] [illegible]
[illegible] imaginibus / exemplo non [illegible] [illegible] in quo [illegible]
[illegible] [illegible] [illegible] esse [illegible] quadam [illegible] intellectus [illegible] obiecti
[illegible] et [illegible] sunt intellectus et obiectum [illegible] [illegible] / obiectum esse
[illegible] [illegible] [illegible] [illegible] intellectus [illegible] .

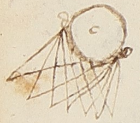
[illegible] [illegible] [illegible] [illegible] / [illegible]. [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] non [illegible] [illegible] [illegible] et in aliquo [illegible]. [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] est
[illegible] [illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in [illegible] c d [illegible]
[illegible] [illegible] [illegible] [illegible] / a / [illegible] [illegible] esse
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] c d [illegible] [illegible]
[illegible] [illegible] in a / [illegible] [illegible] [illegible] et [illegible] [illegible] [illegible]
[illegible] = 2° [illegible] non [illegible] maxima piramis, [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] = 3° [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] +
[illegible] 2° [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] c / [illegible] [illegible] c d [illegible] [illegible] [illegible]
[illegible] f h = 4° [illegible] [illegible] [illegible] a [illegible] [illegible]
[illegible] [illegible] non [illegible] [illegible] [illegible] [illegible] esse [illegible]
[illegible] [illegible] [illegible] [illegible] ad [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] non [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] h g / [illegible] [illegible] [illegible] = 5° [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] non et [illegible] piramis [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] non [illegible] [illegible] / [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] // [illegible]
[illegible] est [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] / [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] / [illegible] [illegible] [illegible] quarum latera faciunt angulos

[illegible] cum [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
quarum latera [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
et [illegible] ambo latera [illegible] [illegible] est [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] / est piramis [illegible] [illegible] [illegible] / [illegible] [illegible]
[illegible] 16 / = 2a [illegible] omnes angulos [illegible] / [illegible] [illegible] [illegible]
[illegible] = 3° [illegible] / [illegible] est [illegible] duas [illegible] [illegible]
ad unum [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] una ad [illegible] [illegible] / [illegible] maior / [illegible] [illegible]
[illegible] / [illegible] [illegible] [illegible] / non [illegible] [illegible] [illegible] / [illegible]
[illegible] / [illegible] [illegible] [illegible] [illegible] / ad [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] duobus [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] / [illegible] 2a piramis / [illegible]
[illegible] / [illegible] [illegible] [illegible] [illegible] [illegible] / [illegible]
[illegible] [illegible] angulos / [illegible] [illegible] latera [illegible] / [illegible] / [illegible]
[illegible] [illegible] [illegible] [illegible] basis / [illegible] [illegible] [illegible] [illegible]
angulos cum angulo [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] 2e [illegible] / [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] 2a piramis / [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] basis / [illegible] maior [illegible] [illegible]
[illegible] [illegible] [illegible] / [illegible] [illegible] / et [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] x [illegible] [illegible] f g h. [illegible] piramis
[illegible] [illegible] d f 3 / [illegible] latera [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] k f [illegible] maior [illegible] / [illegible] [illegible] angulus
[illegible] est minor [illegible] g h f / 26 f maior [illegible] [illegible] [illegible]
[illegible] cum [illegible] / [illegible] // Exemplum [illegible] [illegible] [illegible]
[illegible] [illegible] basis [illegible] [illegible] [illegible] [illegible] [illegible] non [illegible]
esse [illegible] maior [illegible] [illegible] [illegible] [illegible] / 2° [illegible] [illegible]
[illegible] [illegible] ad unum [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] = 3° [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] = 2a [illegible] / [illegible] maxima [illegible] [illegible]
quam [illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] maxima [illegible] [illegible] exemplo [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ad [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] / [illegible] [illegible]
[illegible] [illegible] maior [illegible] [illegible] [illegible] [illegible] [illegible]
3 [illegible] [illegible] [illegible] c / [illegible] / [illegible] piramis c d b
[illegible] maxima cum c [illegible] [illegible] [illegible] // [illegible] [illegible]
[illegible] maximas [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] maxima
[illegible] [illegible] [illegible] [illegible] 2° [illegible] [illegible] / latera [illegible]

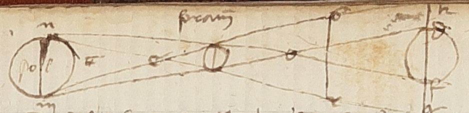






in cono, patet quod in maximo patet quod radii talem superficiem ult-
imi [illegible] et non est reflectens quod [illegible]. patet exhoc quod omnibus
pyramidibus et maximam post eam omnia correspondent pyramidibus
cuspis vel eius portio quod radii se sibi respectantes in cono dila-
tatur in pyramide cuius basis est ipsa aeris [illegible] // Sed alia propositio
non solum luminosum fiat pyramides immo secundum [illegible] ipse secundum omnia
patet quod qualibet parte luminosum eradiat oblique et perpendiculariter, sed
[illegible] quot in quolibet puncto medii esse radios
respectivos immo infinitos radios non [illegible] est [illegible]
non [illegible] cuiuslibet puncti [illegible] illuminate in luminoso patet quod
pyramidalis non est, magis et lineam [illegible] // 9o sequitur
multiplicatur secundum figuram cum distantiam linearum. sic convenientium
eradiatio fiat, secundum has distantias vel radios
// 2o quod accidit luminoso quod fiat pyramides lumen immo ex hoc
quod maius est producat radios rectos et quelibet pars eius ad
omnes partes medii ut patet in figura [illegible] ex [illegible] quod punctum
[illegible] ad omnes partes recte radiat, accidit istos radios
intersectiones immo quasi qualibet fiat pyramides et illa est causa
quod luminosum fiat pyramides in quolibet puncto medii // Ad primum
ad 2m dicitur quod bene concludit de terra talem pyramidem infinitas
oriuntur a punctis [illegible] vel maioribus punctis [illegible] producunt
terra pyramides [illegible] vel [illegible] ex parte. bene [illegible]
producitur [illegible] [illegible], [illegible] [illegible]: notatur
sed 2o quod infinite tales pyramides fiunt in lineam c d vel [illegible]
quod omnes tales pyramides conveniunt in [illegible] in radiis [illegible]
b pyramides fiant in c // ad 2m [illegible] [illegible] [illegible]
[illegible] ad [illegible] et dicitur quod bene ex qualibet pyramide [illegible]
radii concurrunt, remotius secundum [illegible] in luminoso [illegible]
[illegible] // ad 3m dicitur quod non apparet in umbra f h d [illegible]
quod [illegible] [illegible], [illegible] lineam [illegible] [illegible] [illegible] [illegible] et
propter hoc f [illegible] spatium non apparet umbrosum // ad 4m patet per hoc
quod non solum fiant diverse pyramides, [illegible] [illegible] lumen
[illegible] cuspis et [illegible] [illegible] quasi est [illegible] [illegible], ad 5m
[illegible] [illegible] [illegible] dicitur quod verum est, [illegible] [illegible] [illegible], ad [illegible]
dicitur quod [illegible] est sic [illegible] luminosum fiat in quolibet [illegible]
[illegible] est [illegible] [illegible] [illegible] et [illegible] [illegible], [illegible].

Utrum lumen per triangulare foramen cadens, per [illegible] ad
rotunditatem reducatur et quod non quod hoc maxime esset [illegible]
quod [illegible] [illegible] [illegible] [illegible] et elongate [illegible] [illegible]



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[illegible] ad speram [illegible] patet de [illegible] triangularis [illegible] [illegible] in aere
[illegible] quod non potest [illegible] foramen [illegible] per rarefactionem angulos [illegible]
lumen tantum [illegible] per flexionem angulorum ad lumen [illegible] radios
angulos qualibet [illegible] ad hoc et illud [illegible] [illegible]
et [illegible] et magis [illegible] [illegible] ponitur [illegible] aquarum, [illegible]
[illegible] [illegible] [illegible] angulos [illegible] [illegible] ad [illegible] lumen
quod ad [illegible] [illegible] = 2o [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] fieret capacior patet quod [illegible] maxime esset [illegible] [illegible].
reducitur ad speram [illegible] [illegible] [illegible] [illegible] patet [illegible]
et per [illegible] [illegible] [illegible] incidentibus in [illegible], [illegible] [illegible]
est, [illegible] plus [illegible] [illegible] // in basso [illegible] quod [illegible] quod
fiatur [illegible] [illegible] [illegible] [illegible] lumen [illegible] // 3o sed
quod [illegible] [illegible] rarefieret in [illegible] [illegible] quod illa rotun-
datio, videtur [illegible] per angulos illud lumen dilatatio vel deflex-
sionem ad lumen = 4o [illegible] [illegible] fieret lumen rotundum propter
foramen cum [illegible] [illegible] [illegible] [illegible] [illegible] lumen [illegible] immo
[illegible] [illegible] ad [illegible] [illegible] [illegible] quod est [illegible] [illegible] in longa
distantia, = [illegible] lumen non est [illegible] [illegible] a linea [illegible]
[illegible] [illegible] [illegible] [illegible] immo [illegible] radii quod [illegible]
[illegible] radiorum et sic [illegible] esse [illegible] [illegible] immo
[illegible] [illegible] patet [illegible] in experimento quod [illegible] incidentia per
opposita foramina [illegible] [illegible] [illegible]. si [illegible] [illegible]
lumen non [illegible] lateralis [illegible] [illegible] sic lateralis sic rad-
[illegible], [illegible] patet quod [illegible] lumen [illegible] non [illegible] producere
lumen [illegible] lateris, [illegible] [illegible] appareat [illegible] quod [illegible] maxime
videtur [illegible] patet [illegible] [illegible] [illegible] [illegible] [illegible]
ista [illegible] [illegible] [illegible], quod incidentia per foramina [illegible]
[illegible] [illegible] [illegible] [illegible] radiorum [illegible]
[illegible] lumen, foraminis, [illegible], sic [illegible] [illegible]
est [illegible] = Sed [illegible] [illegible] [illegible] quod talis [illegible] est
[illegible] foramen et sole [illegible] patet quod lumen [illegible] [illegible]
[illegible] ad [illegible] [illegible] ad oppositas [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] a sole, [illegible]
[illegible] post foramen [illegible] [illegible] [illegible] patet [illegible] [illegible] // 2o
sed [illegible] [illegible] [illegible] radiorum [illegible], [illegible] [illegible] [illegible]
[illegible] [illegible] foramen, [illegible] quod [illegible] esset [illegible] [illegible]
et [illegible] [illegible] [illegible] post foramen quod [illegible] [illegible] [illegible]
patet ad experientiam quod [illegible] lateralis radii non [illegible], immo
[illegible] [illegible] sic sic [illegible] [illegible] c, [illegible] lumen [illegible]
post foramen [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] quod [illegible] [illegible] [illegible] sol [illegible] [illegible] est [illegible]
est [illegible] [illegible] ad [illegible] [illegible] lumen [illegible] ultra foramen

nota sic est [illegible] lumen
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

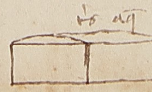
per [illegible] quod est nomine ex quo [illegible] lucis in orbe est non
et lumen [illegible] ubique est non per portionem [illegible], per [illegible]
radii per [illegible] radiantis [illegible] [illegible], si ergo [illegible]
et non [illegible] est non [illegible] [illegible] [illegible] non, [illegible]
- anulus et non ex quo ultra [illegible] quod in [illegible] [illegible]
arc[illegible] [illegible] parte post [illegible], [illegible] [illegible] [illegible] est non
et [illegible] [illegible], [illegible] est [illegible] [illegible] [illegible]. super [illegible]
[illegible] [illegible] [illegible] per tabulam [illegible] [illegible] [illegible] [illegible], patet
[illegible] per elongationem aliquo [illegible] [illegible] [illegible] radios [illegible] post
ex alia parte non [illegible] diameter lucis [illegible] [illegible] [illegible] [illegible]
polus, [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] super [illegible] [illegible]
[illegible] quod [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] videtur [illegible], [illegible] [illegible] quod radii [illegible] [illegible] [illegible]
oriatur [illegible] [illegible] [illegible] [illegible] et [illegible] [illegible]
[illegible] [illegible] [illegible] radiantis est [illegible] [illegible] exigentia
dilatationis radiorum [illegible] [illegible] rotunditas [illegible]
in orbe et [illegible] per rotunda [illegible] [illegible] ad [illegible]
[illegible] [illegible] radios [illegible] lucis [illegible]. [illegible] [illegible]
faciet [illegible] [illegible] lucis [illegible], [illegible] [illegible] [illegible] [illegible]
circulo [illegible] quod rotunda [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] ex [illegible] radii se dilatat post [illegible]
[illegible] quod ergo [illegible] - 2° quod si illi radii post [illegible]
rotunditatem [illegible] non faciat [illegible] ad [illegible] [illegible] lucis
[illegible] [illegible] ubique ex [illegible] lucis vel infra et sic ex
[illegible] radiorum post [illegible] non est [illegible] extensio [illegible]
in orbe quod [illegible] - 3a ergo radiantia post foramen non est rotunda
[illegible], patet per experientiam quod illa prope foramen est angularis
et aliquam distantiam usque [illegible] ad [illegible] est rotunda, ex quo [illegible]
[illegible] [illegible] quod radiantis [illegible] [illegible] post foramen non
est [illegible] ex radiorum dilatatione post [illegible] [illegible], [illegible] [illegible]
foramen et [illegible] [illegible] [illegible] est, quod radii [illegible] [illegible], [illegible]
[illegible] lucis in orbe [illegible] ad [illegible] illa [illegible]
[illegible], [illegible] oporteret [illegible] quod foramen esset rotundum
sic lucis lucis - 4a radiantia [illegible] angularis [illegible]
ad rotunditatem per circulum [illegible] [illegible] patet quod [illegible] [illegible]
quod [illegible] lucis [illegible] [illegible] dilatatur, [illegible] [illegible]
[illegible] ad [illegible] [illegible] [illegible] lucis radiantis, [illegible]
est quod [illegible] radiantis rotundatio non fit per hoc [illegible]
[illegible] primo [illegible] [illegible] [illegible] per [illegible] [illegible]
[illegible] [illegible] radii [illegible] [illegible] ad [illegible] ex [illegible] [illegible]
[illegible], 2° quod [illegible] ~~[illegible]~~ orbe [illegible] [illegible] [illegible]
[illegible] sic distantia polus [illegible] circulo radiantis non esset

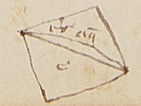
[illegible] circulo polus, [illegible] [illegible] radii quod est [illegible] [illegible]
[illegible] [illegible] [illegible] circulo rotunditas [illegible] [illegible], est maior 5
circulo [illegible] angulos foraminis, patet sic lucis [illegible] [illegible]
foramen est [illegible] foramine et [illegible] rotundatio et [illegible]
non [illegible] ~~[illegible]~~ [illegible], immo [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] ad [illegible] quod ergo [illegible] / 2a [illegible] [illegible], patet per
experientiam manifestam [illegible] [illegible] [illegible] [illegible]
[illegible] et [illegible] [illegible] [illegible] [illegible], et [illegible] [illegible]
elongatam - Ex [illegible] patet quod radiantia [illegible] non [illegible] rotunda
in orbe [illegible] [illegible] [illegible] figura angularis, [illegible] [illegible] [illegible]
circulares, per [illegible] [illegible] et [illegible] et [illegible]
radiorum quod patet [illegible] ex [illegible] [illegible] [illegible] radiantia [illegible]
[illegible] rotunda per [illegible] lucis angularis, non [illegible] [illegible] [illegible]
lucis [illegible] distantia [illegible] [illegible] - [illegible] ergo non est [illegible]
ad apparentiam rotunditatis, [illegible] [illegible] radios [illegible] [illegible], patet 7° [illegible]
quod radiantia [illegible] [illegible] [illegible] [illegible] rotunda rotunditate
[illegible] [illegible] radios [illegible] [illegible] [illegible] [illegible] angulares
et si illi non [illegible], [illegible] [illegible] [illegible], 2° radiis angu
laribus non [illegible] [illegible] [illegible] quod si non [illegible] [illegible]
[illegible] [illegible] [illegible], [illegible] ex hoc non sequitur quod ergo super
[illegible] lucis [illegible], [illegible] [illegible] [illegible], quod lucis [illegible]
[illegible] per angulos, [illegible] [illegible] dilatatur [illegible] [illegible] distantia
per [illegible] radiorum et angulos sic [illegible] radiantia, post [illegible]
foramen quod sic [illegible] [illegible], [illegible] distantia ~~[illegible]~~ lucis non
manebit [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ; [illegible] [illegible] [illegible] [illegible]
- [illegible] ergo non super [illegible] maioris distantiae lucis [illegible] [illegible] [illegible]
patet quod per magnitudinem distantiae radii [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] quod [illegible] [illegible] lucis [illegible]
distantia apparebit, ut umbra [illegible] [illegible] quod [illegible] lucis [illegible]
[illegible] [illegible] umbra, [illegible] [illegible] lucis [illegible] apparebit, [illegible]
~~[illegible]~~ [illegible] umbra sic lucis [illegible] [illegible] ~~ad~~ [illegible]
[illegible] quod [illegible] umbra per [illegible] [illegible] est foramen [illegible]
[illegible], radios, [illegible] [illegible] quod quod circulo radiantis [illegible] [illegible]
apparet in orbe [illegible] distantia, est [illegible] [illegible] angularium
radiorum [illegible] ad [illegible] post foramen usque [illegible]
ut hoc est [illegible] aliquid, [illegible] [illegible] [illegible] [illegible] si radii
post [illegible] ad tantam distantiam [illegible] sic [illegible] [illegible]
[illegible] expansio fieret tanta sic aliquo circulo polus, [illegible] non
[illegible] [illegible] quod lucis apparet [illegible] possibile esse tale. hoc
[illegible] est [illegible] - [illegible] ergo causa rotundationis radiantis radiorum
[illegible] [illegible] angulos foraminis, [illegible] radiorum [illegible] [illegible], dilatatio
et [illegible] patet quod per tales [illegible] radiorum [illegible] [illegible]
angulorum [illegible] radii [illegible] ~~[illegible]~~ [illegible], ad
[illegible] et sic lucis angularis, [illegible] [illegible] [illegible] [illegible] per [illegible]

remotiori ubi abierunt pertransitis illic, unde sentimus angulos
et sic tandem ~~linea~~ linea angulorum se dilatantia concurrunt
ex omni latere et fit circulatio, sicut de mathematica apud experientiam eo
modo quo dictum est. 6. quod linea angularia dilatentur et tandem
concurrant super latera luminis triangularis, et ista imaginatione clarius
ostenditur per lineas, radios, rectas per angulos in corpus intersecantes
etc. Ex hoc patet causa quare umbra angularis corporis subtilis
rotundatur in longa distantia, quia multi radii intersecant se
ante angulos umbrosos. Et quia intersectionum umbra angulorum
umbrosi per remotionem ubi necessario dilatatur et maioratur
et consequenter obtusatur, et sic ut patet. Sequitur 2° quod si foramen
est triangulare solum sunt 3 radii angulares ad apices triangularis
ad apices luminis concurrunt in communi intersectione aequaliter producti et
maioratam radiantiam secundum maiorem remotionem ubi quia
radii alii intersecant inaequaliter, non potest generare radium sic
perpendicularis foramini quam reliqui, patet igitur quod si tempore convadentiae verticaliter
caderet solis eclipsati non sit circulus luminis ad sensum
proportionaliter sicut limulas sicut luna ascenderet de sole, sed
visum patet quod per residua partis solis, adhuc lucida illa causat
radios per angulos foraminis, sicut ante fecit; totus sol
quia radii per intersectionem omnes sicut dictum est, causat istam
radiantiam rotundam communis, ~~[illegible]~~ unde circuli per
primitivos angulos in intersectione quod quaelibet orbicularis sint fundamentum est
maxime in radiantia radiante per rotundum foramen in qua ratione
apud talis [illegible] adspectu, aspectu, quod omnes figurae essent
sol per tale foramen faceret radiantiam rotundam quia globosus est
sol rotundatur, lucida in eclipsi esset radiantia, erit rotunda
sicut patet in experientia dicta, quod faceret esse radiantiam rotundam
[illegible] per [illegible] impedita [illegible] per foramen [illegible]
si sol [illegible] eclipsetur in radiantia, deficeret
[illegible] orientalis et sic, sicut quod maxime partis solis, ubi occidit
[illegible] si partis occidentalis, quod patet plane experientia [illegible]
et [illegible], ultima [illegible], luminis [illegible] non reducitur ad
rotunditatem. Et patet quod hoc non esset per insensibilitatem luminis
partis [illegible] quod [illegible] non est insensibile quod erit per
insensibilitatem sed ad figuram [illegible] talis patet quod luminis non est
natura insensibilis aere [illegible] vel aqua ad figuram aliquam sed mihi
hoc esse verum [illegible] quod radiantia talis, [illegible]
[illegible] quod [illegible] rotundaretur sicut in aere, et si talis
rotundaretur, fieret per reductionem partis triangularis [illegible] ad speciem
cum [illegible] non [illegible] [illegible] nobis [illegible]
Immo sequitur quod partes [illegible] disparerent et [illegible] plus
patet quod fiat [illegible] triangulare foramen [illegible]
in radiantia [illegible] rotundatur [illegible] minoris et [illegible]

et patet [illegible], ubi si luminis [illegible] singulare ipsius
naturae [illegible] ad figuram [illegible] in longa distantia, [illegible]
quod ubique partes aeris et [illegible] essent [illegible] ad figuram speciem
ex insensibilitate luminis quod a sole solum procedunt, [illegible] rotunde
triangulares, quadrangulares, pentagone, exagone, etc., quod [illegible]
est dictus [illegible] omnis figurae laterales [illegible] ut sunt bases
[illegible] [illegible] multiplicatas et post [illegible] conus, [illegible]
[illegible] laterales debiles [illegible] sic [illegible], et [illegible]
quod non [illegible] esse [illegible] luminis [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] quod [illegible] [illegible] [illegible] insensibilis ad figuram
ut videtur alia aliqua, [illegible] quod hoc faceret [illegible] faceret [illegible]
[illegible] adhuc [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] quod [illegible] [illegible] [illegible] [illegible] ad figuram speciem
[illegible] [illegible] quod [illegible] ad figuram [illegible] ex quo sequitur [illegible]
[illegible] triangularis [illegible] ad [illegible] [illegible] solum quo
ad esse [illegible] et sic non quo ad omnia alia [illegible]
non [illegible] ad circulum quod [illegible] non est [illegible]
insensibilitatem [illegible], patet quod [illegible] [illegible] [illegible]
aliquam [illegible] non recipit [illegible] [illegible], sic [illegible]
[illegible] [illegible] [illegible] [illegible] quod [illegible] ad [illegible]
[illegible] [illegible] esset triangularis [illegible] [illegible]
[illegible] quod [illegible] [illegible], non [illegible] ad [illegible]
aliam ad [illegible] [illegible] [illegible] faceret [illegible] [illegible]
quod [illegible] [illegible] [illegible] ex eadem ypotesi [illegible]
[illegible] plus [illegible] quam ad duas [illegible] quod [illegible] [illegible]
[illegible] [illegible] plus [illegible] quam [illegible] duos [illegible] [illegible]
[illegible] sicut patet [illegible]. Sequitur [illegible] quod [illegible] duos vasa

[illegible] [illegible] [illegible], et longitudine [illegible] [illegible] [illegible]
longitudo, plus [illegible]. Sequitur 3° quod [illegible] vase [illegible]
[illegible] [illegible] bases [illegible] [illegible] est [illegible] [illegible]
[illegible] quod patet [illegible]. Sequitur 4° quod [illegible] [illegible] [illegible]
usque ad [illegible] bases adhuc plus est [illegible] quam [illegible], sed
[illegible] [illegible] quia [illegible] aqua [illegible] reducitur, [illegible]
quod [illegible] [illegible] [illegible] sicut [illegible] [illegible] corpora
[illegible] [illegible] [illegible] quod [illegible] [illegible]. [illegible] [illegible]
[illegible] [illegible] et [illegible] ad [illegible] [illegible] quod [illegible] est
aqua non [illegible] [illegible], ad [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] non [illegible],
esset [illegible] [illegible], [illegible] [illegible], [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] sicut videtur [illegible] [illegible]
[illegible] non [illegible] est, quod [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] et [illegible] et [illegible] [illegible]
[illegible] [illegible] ad figuram aliquam [illegible] [illegible] ad [illegible] [illegible]





quod naturalis [illegible] est super adeptionem possibilis rei, id est ad optimam dispositionem [illegible] potest // Ex istis patet [illegible] quod est dicere [illegible] patet quod fiat una aqua generata [illegible] dicto modo [illegible] [illegible] potest [illegible] aqua generata [illegible] reducet ad [illegible] aqua in aere [illegible] naturaliter adscenderet [illegible] aqua [illegible] in aere [illegible] ad [illegible] contrario aqua naturaliter [illegible] adscendere negatur [illegible] vero [illegible] tendentia ad [illegible] vel [illegible] angula [illegible] inferior [illegible] superiores descendentes [illegible] non adscendit [illegible] inferiores adscenderet [illegible] superioribus [illegible] modus quomodo [illegible] non est natura [illegible] adscenderet [illegible] naturaliter [illegible] adscendendum [illegible] alio contrario motu [illegible] fieret [illegible]

Utrum luminosum maius appareat longe quam prope

[illegible] experientia docet quod res apparent maiores in longa distantia [illegible] quod luminosum in maiori distantia apparet [illegible] quod valde longe apparet maior [illegible] apparet maior [illegible] et aliis visibilibus [illegible] luminosum [illegible] apparet longe et prope [illegible] luminosum apparet [illegible] et magnum [illegible] radii longiores debilitantur [illegible] distantia [illegible] [illegible] experientia quod flamma candele in longa distantia apparet maior maxime [illegible] [illegible] ad adsignandum causam ipsius apparentie [illegible] est ad [illegible] reflexionem et fractionem [illegible] luminosum [illegible] apparet maius [illegible] reflexionem radiorum [illegible] fractionem radiorum [illegible] [illegible] radios [illegible] in maiori distantia apparet maiores [illegible] reflexiones et fractiones radiorum [illegible]

[illegible] principaliter lucis [illegible] vero luminosum fuit aliquid [illegible] [illegible] [illegible] reflexione radiorum [illegible] visum et luminosum [illegible] reflexio [illegible] in longa distantia [illegible] luminosum apparet [illegible] magis in longa distantia [illegible] reflexiones [illegible] modus [illegible] apparet [illegible] ex [illegible] reflexionibus [illegible] in aere [illegible] non [illegible] radii non apparet [illegible] reflexiones [illegible] reflexiones [illegible] luminosum [illegible] reflexionum [illegible] ex pyramide [illegible] fractiones [illegible] ad visum [illegible] radios [illegible] luminosum [illegible] apparebit [illegible] fractiones radiorum [illegible] fractionem [illegible] apparebat [illegible] flamma in distantia apparebat [illegible] refractiones [illegible] [illegible] plus valet [illegible] apparet [illegible] et postea maior [illegible] maioritatem [illegible] res videtur [illegible] maioritatis [illegible] visionis est ex hoc [illegible] maiorem [illegible] oculi [illegible] visus [illegible] videbatur [illegible] non super [illegible] longa distantia videtur [illegible] angulo [illegible] luminosum [illegible] postea [illegible] apparent [illegible] videtur [illegible] videtur [illegible] basis est res visa [illegible] basis [illegible] candela in ~~longa~~

in longa distantia videtur esse valde modicum quam candela [illegible]
[illegible] vapores non [illegible] visibus [illegible]
[illegible] luminosum [illegible] elongari [illegible]
et data quantitate distantiae apparebit [illegible]
[illegible] distantia [illegible] magnitudo [illegible]
[illegible] tale apparet luminosum [illegible] plus distat / distantie
[illegible] corpus [illegible]
[illegible] radiationes / et in nullis [illegible]
[illegible] apparere maior [illegible] alio / et similiter de luna
[illegible] luminosum apparebit / maior [illegible] spatium
[illegible] apparet maior [illegible]
exponatur b maior / [illegible]
[illegible] maiorabitur [illegible] luminosum [illegible]
[illegible] apparentiam [illegible] luminosum [illegible]
[illegible] apparet maior [illegible] non apparent maior
[illegible] apparent [illegible]
[illegible] spatium spatium luminosum in elongando maiorabitur
maiorabitur [illegible] apparentiam [illegible]
[illegible] spatium [illegible] apparebit / [illegible]
apparebit / [illegible] non [illegible]
[illegible] remotius / et similiter [illegible] elongatur [illegible]
donec apparebit [illegible]
[illegible] / Exemplum
[illegible] a et b apparet [illegible]
a et b [illegible] remouitur [illegible] donec b apparebit [illegible]
[illegible] remotius non apparebit [illegible]
[illegible] a [illegible] a b [illegible] apparebit [illegible]
[illegible] b [illegible] non [illegible] a [illegible]
[illegible] b [illegible]
[illegible] apparebit [illegible] f [illegible] b [illegible]
[illegible] apparet /
[illegible] spatium [illegible] non [illegible]
apparentiam [illegible]
[illegible] apparet [illegible]
[illegible] a et b [illegible] a et b [illegible]
[illegible]

fa[illegible] i cum [illegible] et [illegible] verum [illegible] / Illa 9o datur
maxima [illegible] quod luminosum in elongando maiorabitur secundum apparentiam
et similiter spatium maximum [illegible] quod talis elongatio / [illegible] apparebit
[illegible] usque ad totalem evanescentiam [illegible]
[illegible] spatium [illegible] diminuto / et [illegible] et maximum
spatium [illegible] quod [illegible] secundum apparentiam [illegible] non [illegible]
maius [illegible] / [illegible] verum est quod dato quocumque spatio
[illegible] quod secundum aliquam [illegible] maiorabitur luminosum in elongando / [illegible]
aliquo minus spatium [illegible] maiorabitur [illegible] quod [illegible] ultimum spatium
[illegible] maiorari in apparentia / Ex quo sequitur quod non datur
maximum [illegible] quod apparebit / [illegible] apparuerit tale
[illegible] / [illegible] spatium [illegible] apparebit [illegible] / sic [illegible]
non datur [illegible] elongatione luminosi minimum spatium [illegible] quod ad tale
maiorabitur [illegible] spatium apparebit tale / [illegible] pedale
[illegible] minus apparebit pedale / sic [illegible] est / 6a 9o [illegible] 6o
luminosi usque ad totalem evanescentiam [illegible] disparebit / [illegible]
[illegible] lux [illegible] debilis quod non apparet [illegible]
[illegible] et in luminosis / [illegible] lux [illegible] visibilis [illegible]
[illegible] apparebit / [illegible] ex
[illegible] / [illegible] et [illegible]
[illegible] elongatio tali / 8a 9o [illegible]
apparebit lux [illegible] et [illegible] lux [illegible]
[illegible] alia [illegible] / obiecta [illegible]
[illegible] lux [illegible] / [illegible]
[illegible]
[illegible] apparebit / [illegible]
[illegible] color [illegible] et [illegible] non
[illegible]
[illegible]
non [illegible] / [illegible] non [illegible] est /
[illegible] apparet [illegible] est ex hoc quod [illegible]
[illegible] et [illegible] non [illegible] color
[illegible]
[illegible] simplices [illegible] non [illegible]
[illegible] / [illegible] apparet [illegible] color [illegible]
[illegible] visibilis [illegible]
[illegible] recipitur [illegible]
et [illegible] non [illegible] / [illegible]
[illegible] / [illegible] visu [illegible] / Ex hoc
non [illegible] extra [illegible]
[illegible] apparet [illegible]
[illegible] / [illegible] non [illegible]
[illegible] ad visum [illegible]

[Left-hand page]

a circumferentia [illegible] (margin)

proprium et hoc est ideo quia interiores medii non attingere non possunt adgregandum alias partes sic absque / ut dicitur ad hoc quia propter illud iridem apparet rubedo citrina et consequenter [illegible] circulus coloratus / qui communiter dicitur halo / item quia apparentia talis sic apparet eadem magis distincte ipsius extremi circa horizontem et extra quia lux in quantum distantia apparet sub figura circulari / sub sole horizonte quia sub alia / et quia lux vel sic est figura stelle / dependet quia sub figura speculi / obliquum ad quod non sufficit / quod non sufficit ad apparentiam reflexionis radii nubis aeris in [illegible] maioritatem et apparentiam debilis lateralis refractionis vel reflexionis // ad 2m dicitur quod propter quod propria apparentia non facit apparere neque horizontem aeris propter ad reflexionem et propter lux obscuritate sensibilis quod lux et magis obscurat minus et sic apparet [illegible] post quam [illegible] illa debilis refractio vel reflexio / sit aliqualiter propter [illegible] / et sic ipsa in opacitate in opaco medio faciat apparere obscuros colores sic in halo / lux et in apparentia blanchedo ut sic est quod visum facit apparere blanchedinem et cetera // ad 3m dicitur quod propter reflexiones radiorum [struck: alterationes] alterationes plures [illegible] cum signum est / quia colores bene apparent et propter clariores colores apparet plures et longiores non apparet propter 4m et propter quod ubi bene [illegible] apparet / [struck: proportionem] semicirculares / quia fit reflexio [illegible] in medio ut [illegible] angulis circulis [illegible] alongatione plures quod propter disparent propter figuram / horizonte figura horizontalis vel circuli apparent postea consequenter refractionis lateralis sic dictum est / ut reflexionis extremo propter quod ubi quod reflexiones laterales fortiores et obliquiores et in reflectentia / lateralis densus et aspectus adtrahere illa lux apparet extremitate densa et [illegible] signum est / quod colores aliquales [illegible] / extremi [illegible] horizonte et propter quod magis apparent magis absconditur ad ventum [illegible] // ad 2am adiciens respondetur quod videtur [illegible] debilis / coloratur in [illegible] // ad 2am negatur quod verum est quod ad in quod anguli correspondent versus angulos versus [illegible] est unum [illegible] // ad 4am dicitur quod in modo distantia obscura ad [illegible] quod in [illegible] coloratur sic apparet et [illegible] est / quod alba apparet [illegible] ad aliquam distantiam quam obscuriora // ad [illegible]

a non [illegible] radios [illegible] reflexionis [illegible] plures [illegible] (margin)

[illegible] (margin)

[Right-hand page]

[illegible] prima 9a / et negatur 2a / et ad probationem negatur ad [illegible] ad ultimam dicitur quod verum est / ista est [illegible] radii obliquiores et longiores possunt magis [illegible] et refractionis in [illegible]

Utrum omnis radius cadens vel exiens sub angulo obtuso sit obliquus / arguitur quod sic / quia [illegible] perpendicularis / est quod continet angulos rectos quod quod continet angulum obtusum est obliqua / 9a est / non quod [illegible] / [illegible] esse [illegible] ante propter [illegible] // 2o quod continens angulum obtusum plus declinat ad unam partem angulum quod omne tale est / obliquum [illegible] / ante propter quod obtusus angulus [struck: fiat] sit quod declinationem [illegible] / 3o quod si hoc non esset verum maxime videretur de radiis incidentibus super angulos obtusos [illegible] propter quod medius talium radiorum et [illegible] maxime incidunt cadunt obliqui quod et tunc radius sit obliquus 9a et quod tale [illegible] quod [illegible] magis [illegible], oppositum arguitur quod radii perpendiculares super convexum speculi faciunt ex utraque parte angulos obtusos / quos quidem excedit / angulum rectum admittendo ex utraque parte cum [illegible] vel horizonte continent angulos [illegible] vel admittunt [illegible] / [illegible] propter quod radii perpendiculares super convexum vel concavum speculi et [illegible] / ab [illegible] cadunt [illegible] faciat ex omni parte angulos [illegible] // 2o propter quod radius super planum perpendicularis continet super angulos rectos / si sint radii [illegible] et [illegible] non est verum // 2o suppono quod radii non sunt [illegible] mathematicales sic [illegible] sunt / propter quod radiorum radiatio admittit [illegible] in magnitudinem [illegible] / et superficies mathematicas laterales [illegible] propter quod angulus [illegible] radii [illegible] perpendiculares super speculi convexum excedit angulum rectum plus quam angulum [illegible] propter quod angulus obtusus / quod continet / medietas ille radius cum convexo excedit angulum rectum [illegible] / [illegible] est / quod angulus obtusus / sub quo cadit radius ille [illegible] angulus [illegible] ad [illegible] minore [illegible] / quod [illegible] propter quod radii perpendiculares super concavum continent angulos acutos super [illegible] angulo [illegible] radii [illegible] pyramidis cum [illegible] cadunt / [illegible] speculi [illegible] radii pyramidales super convexum esse perpendiculares sub angulo obtuso excedente angulum rectum [illegible] propter [illegible] pyramidis cum [illegible] [illegible] speculi [illegible] [illegible] exempla [illegible] parum [illegible]

columnares (margin)

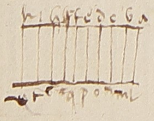
marginis, intelligitur quod existens ibi quod est aliquis radius perpendicularis
aut medius cadit obliquus et similiter quod sit maior medio [illegible] ad evidentiam
perpendicularis et per radios columpnares c x o e [illegible]
[illegible] quod angulus f g m est maior angulo c o n [illegible] f g
quod illa media est super convexum obliqua [illegible] tota linea
[illegible] fiat angulus rectus cum f b ex 3° [illegible] / [illegible]
[illegible] perpendicularis super c x quod non est / circuli contingentis
+ alias medio [illegible] esse similiter circuli et sic linee / quod
circulo [illegible] duo [illegible] quod illa linea / b / l o circuli secant
quod angulus l o n est maior angulo / contingentie quod ille angulus
l o n / maior angulo fiat / cum recto angulo l o c quod angulus
contingentie l g o / cum recto [illegible] quod est propositum / 2a [illegible]
~~[illegible]~~ inspiciatis dispone / et sit l x c e [illegible] maior medio
[illegible] quod angulus e c n est equalis angulo l o n [illegible] quod angulus
l x m est equalis l o n [illegible] propositum [illegible] rectis lineis
contingentibus d c b / et d o z notum est / quod angulus x o f est equalis
z x c / d / extrinsecus intrinsecus / [illegible] ille angulus / x non est equalis
angulo c c b / intrinseco / quod alias due linee d b et d z [illegible] equidistantes
quod [illegible] duobus angulis / contingentie angulus equalis [illegible] 3 o f [illegible]
[illegible] anguli [illegible] equales [illegible] n o f et n c c [illegible] quod est propositum
ista 9° conclusio nota est / de radiis perpendicularibus super convexum
super angulum [illegible] sic patet demonstratio [illegible]
= 2° 2° super partem contingentie convexi [illegible]
concavo / non potest [illegible] radius perpendicularis [illegible] sic novo
daretur angulus rectilineus equalis angulo contingentie quod est impossibile
quod [illegible] non / sicut [illegible] radius perpendicularis [illegible] et quod angulus
f c x / excedit angulum f c b / [illegible] angulus contingentie [illegible]
novo [illegible] recta l c illos angulos [illegible] angulus l c f [illegible]
medietas excessus / angulus f c x / super f c b / quod est propositum [illegible]
= Ex quo sequitur quod super partem contingentie planum cum convexo
sphericali non potest perpendicularis [illegible] et similiter super partem contingentie
[illegible] convexitas / maior sphere contingentie minoris quod ad hoc [illegible]
[illegible] rectilineus / esset minor angulo contingentie [illegible] 2°
angulus contingentie [illegible] excedit alium [illegible] angulum contingentie vel
[illegible] vel [illegible] super partes [illegible] perpendicularis
[illegible] = 3a 9° non datur radius obliquissimus [illegible] ad lucem
sphericam [illegible] angulus [illegible] cum convexo et
medietas / [illegible] minor [illegible]
versus / contingentia ut patet in figura // ex quo apparet quod nullus radius
obliquus faciat angulum contingentie cum sphera [illegible]
[illegible] imaginaria [illegible] est [illegible] radius
[illegible] vocantur contingentes [illegible] imaginaria [illegible]
[illegible] vocantur radii secantes = 4a 9° omnis radius
obliquus [illegible] a centro [illegible] perpendicularis

sit perpendicularis et essent [illegible] radii [illegible] equidistantes qui
omnes [illegible] contingentes circuli super extremitates [illegible] et equidistantes
sit a [illegible] maiores [illegible] basis f ad
[illegible] basis / patet ex hoc quod angulus [illegible] maiores [illegible] sit
maiores angulo [illegible] quod duo anguli tales cum duobus angulis contingentie
faciunt duos angulos maiores duobus rectis quod [illegible]
non concurrunt / sic patet in figura f / et similiter non potest [illegible] radius [illegible]
et concurrunt sic patet [illegible] ex quo patet quod omnes [illegible] piramis / [illegible]
a centro minor [illegible] ab omni [illegible] potest
[illegible] piramis [illegible] radius contingentes circuli super extremitates
angulos rectos / [illegible] faciunt cum ea duos angulos rectos
[illegible] minores duobus rectis quod [illegible] radius [illegible]
[illegible] ex quo patet quod [illegible] est [illegible] / [illegible] non
potest [illegible] piramis / [illegible] non [illegible]
quod [illegible] radius obliquus constituit [illegible] angulos equales
super [illegible] vel rectos [illegible] super planum [illegible]
vel radius cum linea [illegible] radius [illegible] superficie [illegible]
constituit angulos rectos [illegible] / Ex quo patet quod non potest
iste radius constituere angulos / rectos vel equales cum superficie [illegible] quod
est perpendicularis super [illegible] plus [illegible] quod [illegible] angulus
[illegible] superficie ~~super~~ [illegible] perpendicularis super [illegible] / angulus [illegible]
[illegible] obliquitas / vel perpendicularitas / radiorum
superficie perpendicularis super [illegible] / vel [illegible] radius
[illegible] et illa vocatur superficies [illegible] / et postea vocabitur
superficies reflexionis / cum [illegible] de reflexionibus et [illegible]
[illegible] quod linea perpendicularis / [illegible] ex hoc quod [illegible] equales
angulos [illegible] / [illegible] in superficie [illegible]
plana [illegible] ultra [illegible]
[illegible] sphera [illegible]
non [illegible] ex hoc [illegible] circulo [illegible]

v° [illegible] radius perpendicularis / sit fortissimus [illegible] quod non [illegible] ex [illegible]
maxime flexibilis [illegible] maxime debilis [illegible] magis flexibilis
sit debilis [illegible] solus / solus flexibilis [illegible]
[illegible] maxime flexibilis = 2° perpendicularitas [illegible] fortius
super addit radio quod est extensio [illegible] radii // 3° [illegible]
[illegible] quod radius [illegible] super [illegible] obliquis
[illegible] super [illegible] perpendicularis ex sola [illegible] mutatione [illegible]
[illegible] radio // 4° radius obliquus [illegible] longior quod est fortior
perpendicularis [illegible] patet quod radius perpendicularis [illegible]
[illegible] diffusi [illegible] et similiter obliquus alias non [illegible]
contingentes [illegible] modo [illegible] sphera [illegible] lucis
= 9° [illegible] radius perpendicularis est fortissimus [illegible] patet quod [illegible]
datur fortior [illegible] = [illegible] perpendicularis
// suppono quod radius perpendicularis est linea [illegible] vel [illegible] basis

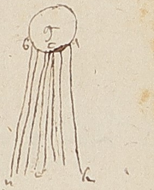
hoc est aptitudo quam capiat in luce / – 2° suppono / quod radii 2° modo [illegible] fortificantur [illegible] / b / et nomen [illegible] lumen additum [illegible]
[illegible] virtus / magis unita efficacia reddatur [illegible] / puta lucis radiantia [illegible] fortificatur /
[illegible] lux [illegible] / [illegible] fortificatur [illegible] diaphanum [illegible]
[illegible]

[illegible]



[illegible]

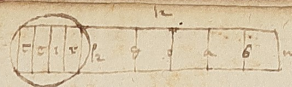
est [illegible] capiatur [illegible] superficiei in [illegible] radium in [illegible] spacium pedale et resolvatur [illegible] luminis [illegible] et [illegible] alias [illegible] remotionis aliquo [illegible] spacium [illegible] alia [illegible] maioris maioris [illegible] alias oporteret [illegible] maiorem [illegible] luminis distantiam [illegible] aliis [illegible] separatas [illegible] alias [illegible] lumen extensum [illegible] una [illegible] superficie totaliter radians ad c [illegible] a c b / superficie remotius [illegible] lumen [illegible] maioris [illegible] radiet / [illegible] ad distantiam [illegible] radium [illegible] superficie [illegible] hoc [illegible]
[illegible]

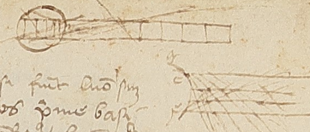


[illegible]

radius est continuata [illegible] / [illegible] producit [illegible]
[illegible] producit [illegible] / et cum [illegible]
[illegible] continuatam [illegible] / et [illegible]
[illegible] producit [illegible] continuationem [illegible]
[illegible] aliquo [illegible]
[illegible] producendo [illegible]
[illegible] distantia. [illegible]
et non [illegible] aliqua [illegible]
[illegible] remoto [illegible] non est [illegible]
[illegible] distantia [illegible]
producendo et difficultas [illegible] difficilis est / aliquem effectum [illegible]
remote [illegible] non producit [illegible]
[illegible] intensitatem [illegible]
[illegible] et difficultas [illegible] producendo / [illegible] non [illegible]
uniformiter difformiter / [illegible] agentis / adistantia / [illegible]
[illegible] difficultas [illegible] distantia est
[illegible]

[illegible]





[illegible] radiatio radiatio agentis / [illegible] maxime [illegible]
[illegible]
[illegible] producit
[illegible] ad experientiam [illegible] experientia [illegible]
[illegible]
[illegible] radiationes [illegible]. Ex ista [illegible]
[illegible] uniformiter difformiter [illegible]
[illegible] difformiter difformiter [illegible]
experientia [illegible] candelas / [illegible]
[illegible] candelas / [illegible] distantia [illegible]
[illegible] uniformiter difformiter / [illegible]
[illegible]

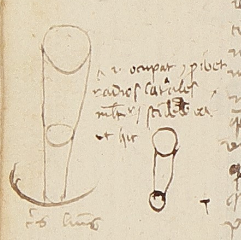
[illegible]

4444	
1234	
4321	

perpendiculares. dicitur aliquis potentior solis [illegible] extremitatem
efficacie et non distinctius. patet exemplo solis [illegible] admoveatur quod radius solis
in respectu meridionalitatis sit potentior radiis [illegible] quam [illegible]
propter maiorem appropinquationem ad perpendicularem et quia radii magis [illegible]
lumen reflexum cum incidente, propter quod intenditur actio radiorum
= aliqua 9a. radii perpendiculares concurrentes, dicitur fortior aliquis solis
una concurrens [illegible] communi [illegible] alios patet quod alie
due [illegible] reflexio, et [illegible] non [illegible]
exemplum passum // 8a 9a perpendicularitas radii [illegible] facit
admixtionem actionis quia perpendicularitas [illegible] patet exemplo
quod [illegible] propter reflexionem et [illegible] frequentius [illegible]
concurrentis non [illegible] in 200 quam 10 = Exemplo per [illegible] patet
quod radii obliqui concurrentes, [illegible] lumen per fortius agit, in passum
quam perpendicularis concurrens, patet si fuit obliqui concurrentes super
passum perpendicularis et perpendicularis concurrens super passum obliquos et
propter hoc [illegible] proportionalem [illegible] solis magis
[illegible]

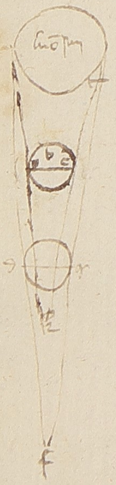
[illegible]

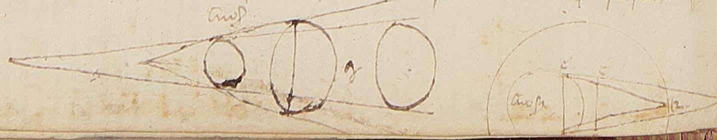
concurrent, [illegible] lumen [illegible]
quam [illegible] data, quod patet [illegible] de puncto, quia radios obliquos
[illegible] et [illegible] in puncto. [illegible]. si alius [illegible] lumen
producitur [illegible] radio perpendiculari obliquum
et alius [illegible] patet quod [illegible] lumen [illegible]
[illegible] = Ex isto sequitur quod non [illegible] radii obliqui
est [illegible] obliquitatis quam alias lumen [illegible]
[illegible] semel obliqui et semel recte [illegible]
radii obliquus [illegible] basis est in [illegible] sit perpendicularis quod est
[illegible] patet 3o, quod [illegible] puncto [illegible] lumen agit
obliqui et recte patet de [illegible] exemplo non [illegible] alium [illegible]
[illegible] agit obliqui et [illegible] alium perpendicularis, exemplo ubi
[illegible]



[illegible]

[illegible]





[illegible]

[illegible]

[illegible]

[illegible] recta linea [illegible] non [illegible] alia recta [illegible]
[illegible] speculum [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible]

[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] linea recta [illegible]
[illegible]

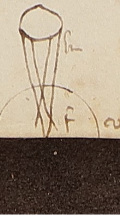
[illegible]

[illegible]

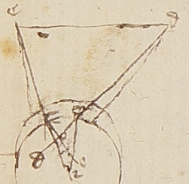
[illegible] speculum [illegible] [illegible] [illegible]
[illegible]

[illegible] omne quod videtur recte videtur [illegible] non [illegible]
[illegible] visu [illegible] [illegible] linea [illegible] visus [illegible] radialis [illegible]
[illegible]

[illegible] refractio [illegible] radius [illegible]
[illegible]



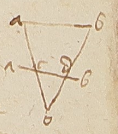
[illegible]



[illegible]

[illegible]

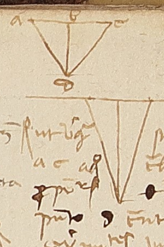
[illegible]



[illegible]

angulus maximus sub quo fit visio, perspectum est in vitro recto (?) ponatur quod lamina [illegible] sit areae (?) loco quadratum et non
+ plena lamina quadrata. Et si una [illegible] sit opposita illi angulo, perspectus omnis visus sub maximo angulo esset. Forma duplici duplum
ad distantiam visibile erit [illegible] visus, verum est quod costa quadrata est dupla ad distantiam modo [illegible] costa, claritas quae
et clara est, quod ex hoc quod minor costa [illegible] alia pro longiore est minor quam 2a ad dictam distantiam [illegible]
— Ex quo patet quod [illegible] tantum angulus est oculo duo [illegible] visa est minor [illegible] et duo [illegible]
visa i. sub pyramide [illegible] est minor 4a // [illegible] ergo [illegible]
[illegible] visa i. sub pyramide super oculum [illegible] ab aliis
[illegible] solo visu non potest distingui [illegible] ad hoc [illegible]
[illegible] [illegible] oculo [illegible]
[illegible]

[illegible]



[illegible]

per lineam ... (marginal note, [illegible])

[illegible]

[illegible]

[illegible]

illa species ... ulterior experientia ... non videtur ... modo(?) adquisito actu ... alio(?) ... vero maxime simul et tamen non semper actualiter intelligentia ... species illa ~~[illegible]~~ memorie ... organum memorie ... alia dispositio qualificata ... organum imaginative ... dispositio est ... organum et quia tales dispositiones ... memorie ... organum memorie ... notabile ... organum ...

[illegible]

[illegible]

[illegible]

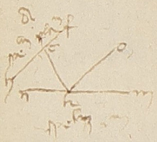
reflexi sic ab illo plano / sufficient porrigi ad terram non ob magnitudinem distancie vel saltem non ob magnitudinem / predictam, illo quod terra esset / et centrum speculi gemini adhuc insensibile ex centro non pr reflecti vnque sol appareret / notis in plurimis locis. Si autem tantum stelle prime et una stella appareret plures et sic non ordinate apparent in gemino celi esset stella vero non si multo essent solis aspectus / Et forte sic ordinatum est ad salutem inferiorum quod aspectus radij omnes ad inferiora generantur / si radij qui sursum multiplicantur per illam extremam reflexionem omnes converterentur versus ad inferiora / fenestra id est videretur alias illi radij sursum multiplicati versus aliud vacuum / radiositas / id est aspectus est [illegible] inferiora Et sic super dubio / aliqui talium radiorum sic reflexorum peruenirent per eum ad visum exque non esset in vento alicui speculi gemini visus et sic contingeret aliquid esse quod apparet fantasticum / et sic apparet aliquid esse aliud, apparet multiplicitur et alios aspectus fixos in uno [illegible] quod illud esset in eo quod disparuerit / quia videret proprie commune / eciam [illegible] diuersificata dispositio quam voluntas // Inferiorum ex hoc in genere / quod interius naturalis sic longa fiat ad vacuum reflectitur et ergo si vacuum fieret aliquid nos adiuuant distancia generaliter si videret aliquis sicut super hoc quod videret aliquid spiritu vel aliquid aliquo / sic videret in forte aliquid vacuum aperte [illegible] quod non est ut aliquid, quod per mouetur visum quod sic / est / solet apparere [illegible] / sicut patet in [illegible] / et saltem [illegible] clarissimos / nullo mouente / visum vel ad ex apparere / [illegible] // ora pterea [illegible] possit [illegible] / ex hoc quod radius reflexus non videatur [illegible] ad aliquid reflecti ut illud aliquid ipsum potest radius reflexus [illegible] — et ex hoc quod agens reflexiue agit effectu sui [illegible] de [illegible] aliquando quod alias sic reflectens vero non esset diaphanum [illegible] potens et dispositum in sint aliquo reflexo et speculatis [illegible] diaphanitas / esset de extrema speculi post mare [illegible] — 4ta questio / [illegible] quod nullo modo vniuersis non fit reflexio [illegible] / non difficile [illegible] / [illegible] ad lateris / reflexionis [illegible] disposito [illegible] modo fit radius et finalis est agens ex directe quam reflexe [illegible] ordo / qui deberet / reflecti. 2° sic sic. [illegible] apparet aliquando inuisibili / vniuersum lineis transuersis [illegible] dividendo [illegible] [illegible] [illegible] [illegible] a / b aspectibus / c d fieret / reflexio / a o f [illegible] a b c d fieret reflexio a o f, sic visus [illegible] a f [illegible] et saltem exemplum [illegible] et non [illegible] radios generantur [illegible] est transuersa quod radius a o f [illegible] reflecti [illegible] o, c d quod illo est longissimus et minimus [illegible] / [illegible] aggregatur [illegible] [illegible] [illegible] est / transuersa [illegible] [illegible] radius [illegible] — [illegible] solutio [illegible] reflexionis [illegible] a f [illegible] [illegible] [illegible] vi [illegible] [illegible] [illegible] [illegible]

(Margin:) [illegible] reflexio [illegible] [illegible] [illegible] reflexio [illegible]

(Margin:) [illegible] [illegible] reflexio [illegible] speculo [illegible] de [illegible]

quod per quod sunt non reflecteret [illegible] [illegible] circulo, respectu visus / [illegible] / [illegible] et sic / super [illegible] [illegible] [illegible] sunt [illegible] potest tamen sic [illegible] reflectendo [illegible] // [illegible] radij perpendiculares reflectuntur [illegible] [illegible] [illegible] / [illegible] per [illegible] et saltem [illegible] obliquis cadentibus [illegible] non reflectuntur [illegible] [illegible] [illegible] perpendiculares [illegible] / [illegible] saltem [illegible] [illegible] radij perpendiculares [illegible] [illegible] vel [illegible] / super [illegible] [illegible] vel super [illegible] [illegible] [illegible] vel speculares non reflectuntur [illegible] [illegible] [illegible] obliquis cadentibus sic [illegible] sunt — [illegible] radius est [illegible] [illegible] / [illegible] [illegible] ex radio reflexo et cadente [illegible] reflectitur [illegible] [illegible] [illegible] [illegible] [illegible] radij cadentis 8 a 6 [illegible] et reflectatur [illegible] ex [illegible] o / 4 3 2 1 [illegible] 4 3 2 1 [illegible] [illegible] [illegible] [illegible] 4 [illegible] 1 2 3 [illegible] radius reflexus [illegible] / [illegible] et cadente / [illegible] non in [illegible] / radius reflectitur [illegible] [illegible] [illegible] [illegible] reflexe [illegible] agens / non [illegible] [illegible] [illegible] [illegible] reflectendo / [illegible] a° [illegible] reflexionem [illegible] linea cadens / et linea reflexa [illegible] super [illegible] super speculi [illegible] / [illegible] oculo [illegible] visibile apparet [illegible] speculo plano / [illegible] [illegible] obliquis super [illegible] [illegible] [illegible] / [illegible] / et solum [illegible] quod [illegible] imagines in solido, et illa ponatur [illegible] reflexionis [illegible] visibilis non reflectitur ad [illegible] oculum in abisso [illegible] / speculi [illegible] super [illegible] reflexionem [illegible] [illegible] [illegible] [illegible] [illegible] oculi [illegible] [illegible] abisso [illegible] ex [illegible] ad vnam [illegible] plures [illegible] [illegible] [illegible] plures super [illegible] / reflexiones et [illegible] reflexionibus / [illegible] / [illegible] reflexionis super [illegible] plures [illegible] reflexionem [illegible] [illegible] plures [illegible] abisso [illegible] — [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] reflexio [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] reflexio [illegible] radij [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non apparebit [illegible] reflexionis [illegible] [illegible] [illegible]

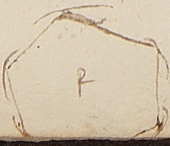
(Margin:) [illegible] [illegible] [illegible] [illegible] 8. [illegible] 2° [illegible] ad a et 3 ad 6 et [illegible] ad [illegible] [illegible] [illegible] [illegible] [illegible]

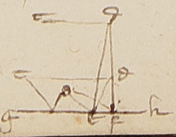


quod radius reflexus ab illo speculo super superficiem ipsius perpendiculariter / patet quod res apparebit oculo esse directe [illegible]

[illegible] reflexionis [illegible] speculi [illegible] radius [illegible] reflectitur

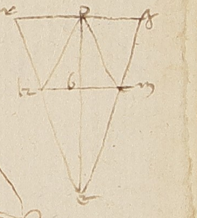
[illegible]



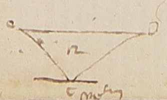


speculo [illegible] plano ad [illegible] oculus reflectitur [illegible]

[illegible] speculo [illegible] reflexio [illegible] speculi [illegible]



[illegible]



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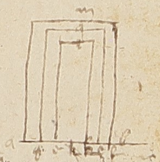
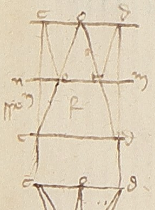
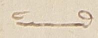
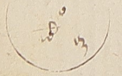
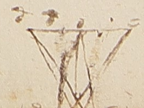


[illegible]

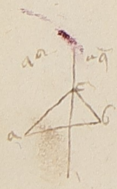




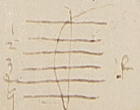


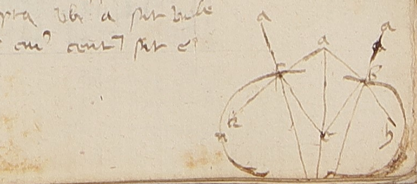


[illegible]



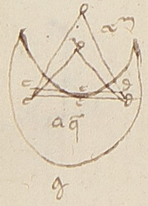
[illegible]





[illegible] radii refracti non [illegible] [illegible] [illegible] apparebit [illegible] refractionum [illegible] radios refractionum [illegible] radiis refractis [illegible] apparere [illegible] refractionis [illegible] radius refractus [illegible]

[illegible]

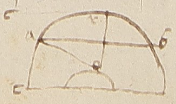


[illegible]

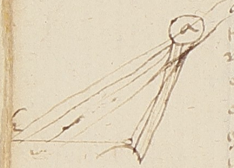
[illegible] radios [illegible]

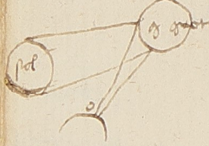
[illegible] reflexionum [illegible]

[illegible] reflexio [illegible] reflexionum [illegible] reflexio [illegible]



que propter [illegible] sit / quia non fit per reflexionem a superficiebus
guttarum plurimarum [illegible] in magna [illegible]
et non a superficie / nubis alicuius adeo non [illegible] [illegible] // 2a [illegible]
[illegible] radium [illegible] fit reflexio / ad visum ex[illegible] [illegible]
[illegible] / inter solem et nubem [illegible] [illegible] [illegible] perpendicularem super superficie[m]
radium a sole / per centrum gutte [illegible] signata fuit [illegible] vel
et [illegible] [illegible] perpendicularis [illegible] [illegible] reflexione
cadentes [illegible] super [illegible] centro gutte / oculi et solis / reflectentur
[illegible] [illegible] [illegible] [illegible] obliquo [illegible] / quod reflectentur
[illegible] / oculi [illegible] [illegible] aliquo [illegible] / [illegible] gutta [illegible]
que [illegible] non [illegible] / [illegible] [illegible]
[illegible] per [illegible] / a / [illegible] / per guttam / [illegible] sol sol [illegible]
[illegible] [illegible] [illegible] demonstrat [illegible] gutta [illegible]





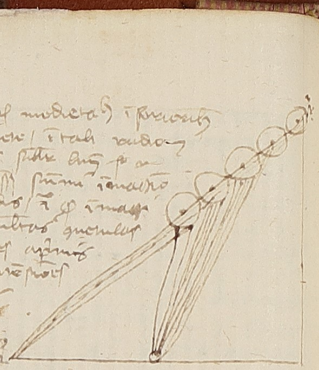
[illegible]

[illegible]

linea a b per perpendicularis super e b n / igitur [illegible] quod omnis [illegible]
tantum [illegible] [illegible] / [illegible] // Ex ista demonstratione multa [illegible]
demonstrantur primo quod super ~~[illegible]~~ centrum polis / et [illegible] et centrum
radios / quia in una recta linea quod [illegible] axis radios // Ex quo ulterius [illegible]
quod centrum radios / elevatur [illegible] depressionis polis / [illegible] super
elevationem quod [illegible] quanto [illegible] magna elevationis polis / centrum radios
[illegible] orizonte et quanto [illegible] depressionis polis / [illegible] orizontem [illegible] elevatur
super orizontem [illegible] [illegible] [illegible] / [illegible] post modo quod arcus radios
quanto [illegible] [illegible] [illegible] et quanto magis [illegible] [illegible] hoc quando axis
radios [illegible] orizonte [illegible] centrum orbis [illegible] quod maximus arcus apparens
quando [illegible] super polis [illegible] orizontem in ortu [illegible] ex quo ulterius
[illegible] maxima altitudo [illegible] [illegible] non [illegible] [illegible] [illegible]
radios [illegible] maius [illegible] / [illegible] quando altitudo polis quod multa altitudo
radios est / maxima et [illegible] [illegible] [illegible] post [illegible] polis
radios / [illegible] axis ex opposito / polis / [illegible] maius [illegible] super [illegible] polis
[illegible] altitudo radios [illegible] maxima altitudo radios / [illegible] quod maxima
altitudo radios / [illegible] [illegible] [illegible] quod [illegible] / [illegible] maxima
polis / [illegible] apparens radios / [illegible] / [illegible]
a [illegible] [illegible] altitudo radios / [illegible] [illegible] /
quod polis elevatus / quod 42 gradibus / [illegible] est / radios [illegible]
in [illegible] quod altitudo radios [illegible] [illegible] et quanto [illegible] super
[illegible] [illegible] [illegible] maius [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] super [illegible] radios [illegible] [illegible] arcus [illegible] super [illegible]
[illegible] [illegible] quod [illegible] [illegible] polis [illegible] elevatur [illegible] maxima
altitudo radios / [illegible]. [illegible] quod 42 gradibus [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] quod [illegible] [illegible] apparens arcus [illegible] [illegible]
[illegible] / [illegible] non [illegible] radios [illegible] [illegible] [illegible]
[illegible] / [illegible] arcus est in 42 [illegible] [illegible] quod altitudo
[illegible] radios est super super axis radios [illegible] / [illegible] ex hoc quod
radios / est / orizontem [illegible] [illegible] quando axis radios [illegible] / orizontem
[illegible] [illegible] [illegible] [illegible] / ex quo ulterius [illegible] [illegible]
[illegible] radios / [illegible] in orizonte [illegible] / [illegible] [illegible] [illegible]
polis et quanto [illegible] quod [illegible] quando centrum polis / [illegible] [illegible]
[illegible] [illegible] centrum orbis [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] super quod polis maius
elevatur et super hoc [illegible] maius [illegible] [illegible] [illegible]
[illegible] [illegible] arcus radios / [illegible] [illegible] [illegible] quando
[illegible] [illegible] [illegible] [illegible] quod quanto [illegible] [illegible] arcus radios
[illegible] [illegible] arcus [illegible] [illegible] / [illegible] [illegible]
[illegible] [illegible]. [illegible] quod [illegible] [illegible] [illegible] [illegible] arcus

radios apparentiam [illegible] alie [illegible] [illegible] apparentis
radios / apparent [illegible] [illegible] / [illegible] quod [illegible] orbis
[illegible] [illegible] [illegible] in plano / [illegible] ex opposito polis /
apparent [illegible] [illegible] quod [illegible] centrum radios / [illegible]
[illegible] ad [illegible] // [illegible] hoc ponatur [illegible] [illegible] quod [illegible] radios
est [illegible] [illegible] / [illegible] [illegible] [illegible] / [illegible]
[illegible] est polis [illegible] [illegible] / [illegible] quod [illegible] radios est
[illegible] [illegible] polis / [illegible] radios [illegible] polis / [illegible]
[illegible] [illegible] [illegible] radios reflectuntur ad
[illegible] [illegible] [illegible] [illegible] [illegible] radios reflexi / [illegible] / [illegible]
[illegible] / [illegible] radios [illegible] [illegible] [illegible] [illegible] [illegible]
reflectuntur [illegible] / [illegible] [illegible] // Ex [illegible] [illegible] [illegible]
[illegible] radios / ad [illegible] polis / [illegible] ad [illegible] [illegible] [illegible]
[illegible] / est [illegible] [illegible] radios [illegible] ad [illegible] [illegible]
[illegible] [illegible] radios / [illegible] [illegible] radios reflexi ad
radium reflexum [illegible] [illegible] [illegible] quod [illegible] radios
[illegible] [illegible] polis / [illegible] [illegible] / est [illegible]
[illegible] [illegible] reflexi [illegible] [illegible] [illegible] ex [illegible] [illegible]
[illegible] [illegible] / [illegible] c d. [illegible] radios / [illegible] polis
[illegible] o [illegible] centrum polis / et radios / [illegible] o d est [illegible]
reflexa [illegible] [illegible] reflexione [illegible] [illegible] h [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] polis reflexa
[illegible] [illegible] radios / [illegible] [illegible] [illegible]
[illegible] et [illegible] [illegible] apparent [illegible] colores [illegible] quod [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
est magnam [illegible] [illegible] [illegible] [illegible]
radios reflexos [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] radios [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] reflexionum [illegible] radios [illegible]
[illegible] reflexa [illegible] [illegible] ad apparentiam colores [illegible]
[illegible] [illegible] [illegible] o d [illegible] [illegible]
[illegible] [illegible] [illegible] a b c d e f [illegible]
est / [illegible] / [illegible] polis [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] radios reflexi
[illegible] [illegible] o d [illegible] [illegible]
[illegible] / ex hoc [illegible] [illegible] /
[illegible] [illegible] ad [illegible] colores
[illegible] non [illegible] [illegible] [illegible] radios
reflexi [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
et [illegible] reflexionum
[illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] / [illegible] [illegible] ~~[illegible]~~ [illegible] [illegible]



et ex fieret reflexiones ab eius medietate in circumferentia
ad oculum; et sic quot essent guttae, tot radii
ex tali apparatione reflexionum stellae lucis per ea
reflexarum formarentur, et ex hoc possunt sumi imaginationes
et opus specialis; deferantur radii; [illegible] quod imaginatur
[illegible] in hac re valde mirabilis [illegible]
et imaginationes quod reflexiones [illegible]
[illegible] ab ore [illegible] ad [illegible]
causam primam colorem [illegible]
[illegible] alie
reflexiones [illegible] duo, [illegible]
[illegible] nobis differentes
colores obscuriores et per reflexiones superiores perfectiores radios
radios; secundum apparentia [illegible] inferiores [illegible] vero [illegible]
alie perfectae [illegible] superiores [illegible] apparerent [illegible]
[illegible] apparentes et [illegible] hoc quod longius radios reflexos non
[illegible] // Ex isto [illegible] quod [illegible] radios [illegible]
plurima radios admittit; facere ad oculum [illegible] quod reflexiones [illegible]
ad apparentiam radios; fiunt [illegible] [illegible] [illegible]
oculos // Ex quo patet quod [illegible] reflexos [illegible] causatam [illegible]
colore albo [illegible] quod [illegible]
= Ex quo [illegible] manifestatio [illegible] ab oculo [illegible] radii quod
colores [illegible] debent apparere; et [illegible] apparere [illegible]
[illegible] plurimas [illegible] radios
quod alias [illegible] apparerent [illegible] / [illegible]
[illegible] facere ad oculum [illegible] in [illegible]
respondeo [illegible] colores [illegible] reflexiones
superficies ad apparentiam et [illegible] in nebula [illegible] ad [illegible]
visum [illegible] hoc non [illegible] / ad oculum
respondeo [illegible] colores non [illegible]
[illegible] et [illegible] non [illegible]
[illegible] ad visum [illegible] et [illegible] ad
visum et ad solem [illegible] stellas et non [illegible] stellas [illegible] ad
visum et solem [illegible] et [illegible] radios [illegible] ad oculum
in [illegible] / [illegible] pentagonum [illegible] ex
gonium et [illegible] reflexiones [illegible] polygonium
[illegible] faciunt apparere tales colores [illegible] polygonia [illegible]
[illegible] superiores [illegible] radios [illegible]
[illegible] perfectae [illegible] radios /

[illegible] de maximo et minimo

q Videtur non sit dare maximum quod Sortes sufficit portare. Probatur sic quia si sic
sit illud a, et arguitur sic: Sortes sufficit portare a; igitur per aliquem excessum
excedit potentia Sortis resistentiam a ponderis. Consequentia patet quia nisi potentia excederet
nec appareret minimo [illegible] non fieret motus nec actio. Et ultra arguitur sic:
per aliquem excessum etc.; sed non per excessum indivisibilem; igitur per excessum divisibilem.
Consequentia patet quia dempto a potentia [illegible] [illegible] adhuc [illegible] non
fieret motus, quod est contra. Et accipio illum excessum et arguo sic: per medietatem illius
excessus sufficit Sortes portare a; igitur per aliam medietatem [illegible] residuo
potest Sortes portare maius a; igitur non est maximum pondus quod Sortes sufficit
portare. Et sic arguitur de a, sic patet ratione [illegible] ponderis maioris
a quod Sortes sufficit portare.

q Videtur sit dare minimum quod Sortes non sufficit portare. Probatur
capio aliquod pondus quod sit [illegible] Sortis quod sit a, et arguitur sic:
a non sufficit Sortes portare; sed [illegible] minus a sufficit Sortes
portare; igitur a est minimum quod Sortes non sufficit portare. Consequentia patet [illegible]
[illegible] [illegible] [illegible] quia [illegible] non fieret
actio, [illegible] probatur sic: per aliquem excessum excedit potentia Sortis resistentiam
[illegible] minus a; igitur [illegible] minus a sufficit Sortes portare;
[illegible] probatur: per aliquem excessum excedit resistentia a resistentiam [illegible]
minus a, sed resistentia a et potentia Sortis sunt equales; igitur etc.

q Non sit dare maximum tempus per quod [illegible] potest esse [illegible]
quia si sit, sit illud a, et arguitur sic: vel a est tempus solum finitum
vel tempus infinitum; si sit tempus solum finitum, igitur a non est maximum,
quia probatur non [illegible] est tempus solum finitum [illegible]
per quod [illegible] potest esse [illegible], ut [illegible] tempus non [illegible] aliquod tempus maius eo per quod [illegible]
potest esse [illegible]; igitur si a sit tempus finitum per quod [illegible] potest
esse [illegible] a non est maximum etc. Si sit tempus infinitum [illegible]
[illegible] quod si [illegible] potest esse [illegible] per tempus infinitum,
sit igitur quod sit [illegible] per tempus infinitum, et arguitur sic: [illegible] est [illegible]; igitur
[illegible] [illegible]; consequentia patet et [illegible] [illegible] [illegible] est [illegible] per tempus
infinitum; igitur [illegible] [illegible] [illegible], et sit [illegible] quod [illegible] sit [illegible] per
tempus infinitum quod [illegible] et per [illegible] [illegible] quod est [illegible] et [illegible]
illud [illegible] [illegible] [illegible] quod sit dare maximum tempus
per quod [illegible] potest esse [illegible].

q Videtur non sit dare minimum tempus per quod [illegible] non potest esse
[illegible]. Probatur et arguitur sic: [illegible] vel illud est solum finitum
vel tempus infinitum; si finitum, igitur non minimum, et [illegible] per [illegible] per [illegible] tempus

Post hoc simul aliquis potest esse futurus, ergo nullus ipso simul est minimum quo aliquis potest esse futurus, ergo nullus ~~est minimum quo~~ ipso simul est minimum quo aliquis potest esse futurus, ergo nullus est minimum quo aliquis potest esse futurus, quod patet et arguitur similiter. Si sit iste casus, id est possibilis, et arguitur sic: quod ad hoc quod ista propositio esset vera, a esset minimum ipso quo aliquis non potest esse futurus, requiritur quod utraque exponens sit vera, sed altera exponens est falsa, ergo etc. quod ista propositio est falsa, nulla ... non sit tamen falsa quo aliquis ipso minus a potest aliquis esse futurus quod sit a ipso tempore ab illo instanti, et sit preteritus infinitum, et sit b unum aliud ipso tempore ... instanti ... et preteritus infinitum, isto posito, patet quod non possibilitas ipso minus a quam b ipso minus a non potest aliquis esse futurus quia ipso simul non potest aliquis esse futurus, b est ipso simul ergo etc. quod patet et arguitur ipsorum duorum.

Non sit dare intensissimum gradum quem habet a quo possibile est quod supponitur per unum ... dispositio ... sit extremum ... et ad quem ... extremi ... extremum ... ad quem ... extremi supposito, arguitur quod non sit dare, et etc. quod si sit sit aliud b et arguitur quod non ... b gradu et gradum ad quem ... a ex extremo ... eadem ... et illa ... extremi quo ... b, ergo b non est intensissimum ... quem habet a, ergo a habet omnes ... b et ... ergo nullus est ... b ... et si aliquis sit ... b non est intensissimus ... gradus ... arguitur quia b ... et ... sit falsum ergo etc.

Non sit dare remississimum ... quem non habet supposito casu ... arguitur quod non sit dare, etc. quod possibile ... et ... b ... non est remississimus gradus quem non habet a, et nullus est ... b, ergo b ... a ... non est ... sit b ... quem non habet a ergo etc.

Vel sit dare remississimum graduum ultra gradum quem non habet a, ponendo casum predictum, et pono quod ... sit gradus ad quem tendat ... extremum ... et arguitur sic: gradum remississimum ultra gradum medium non habet a, et quamlibet remissiorem gradum b gradu ultra ... medium habet a, ergo b est remississimus gradus ultra gradum medium quia et maior patet ex casu, supposito et minor ... omnes gradus ultra gradum medium et ... b gradu habet a, et ... ultra gradus ... gradus remissiores b ... gradu ultra gradum medium ergo minor ... quia patet et maior ... ex casu et minor ... .

Non sit dare intensissimum gradum medium quem habet a ... possibile quod ... quod non sit dare ... gradum quem non habet a etc.

Sit dare maximum quod sortes non potest videre quod ... et capiatur aliquod visibile quod sortes non potest videre quod sit a, et arguitur sic: a est maximum quod sortes non potest videre et illud est maius a quam illud sortes potest videre, ergo est maximum quod sortes non potest videre, quia patet et arguitur et ponatur quod a sit aliquod visibile sit dispositum impedimentum quod sortes ... absconsum illud a sit ... illo a sit omnes ... dispositiones illud a sit ... illo supposito arguitur sic: quod pono quod a est magnum quod sortes non potest videre patet et minor quod omne excedens a potest sortes videre, et ... est maius a quam illud excedit a ergo et a ... maius a quam illud sortes potest videre, quia patet et arguitur ... sit omne excedens a possibile est sortes videre quod omne excedens a potest sortes videre quia et arguitur patet ... .

Non sit dare minimum quod sortes non potest videre ... quod supposito sit illud a et arguitur sic: non potest videre a, aliquod ... et non ... sit ... sit videri ... ad a ... dispositum ... quod a non est minimum quod sortes potest videre quia patet ... ad a potest sortes videre ergo etc. ... sit non sit dare minimum quod sortes potest videre, sit illud a et arguitur sic: a est minimum quod sortes potest videre ergo a potest sortes videre et nullus minus a potest sortes videre, quia patet ... et ... falsum ... et ... aliquod ablata aliqua proportione ... potest sortes videre a et aliquod ablata aliqua proportione a est minus quam ... sortes non potest videre quia patet ... maius ... sit una aliqua ... ablata aliqua proportione a tanta maius proportione ... possibile ... ablata ... proportione

quo ad maximum conclusa etc.

Quarto sit dare maximum activum agere in b passum per non potest. Probatur quia supponitur aliquod activum et potentia est equalis resistentie b passi et activum sit a, et arguitur sic: a b a non potest b passum pati, sed equaliter maior a b pati potest. Igitur a est maximum agere in b passum non potest, quia patet et ambo arguitur per utramque partem quod si maior esset facta sufficeret quod approximatio equalitatis proportionis motus quod est falsum igitur quod proportio ab a b pati potest, sed potentia a [illegible] potentia b approximatio equalitatis igitur approximatio equalitatis proportionis motus quia patet ex quo actio non potest esse minus [illegible] sit quantitas potentia maior a excedit resistentiam b per excessum datum sufficeret agere in b, et ultra arguitur sic quantitas potentie maior a etc. sed quodcumque sufficeret agere in b agere b pati potest igitur aequaliter maior a b potest pati quod est maximum conclusa.

Non sit dare minimum activum b pati potest quia si sic sit illud a et arguitur sic: ab a activum b pati potest igitur per aliquem excessum potentia a activi excedit resistentiam b passi sed non per excessum idem [illegible] igitur per excessum datum [illegible] excessum [illegible] [illegible] minor [illegible] excessus et arguitur sic [illegible] ab a activum b pati potest [illegible] a est minimum [illegible] igitur non [illegible] minimum activum b pati potest quia patet [illegible] [illegible] potentia a excedit resistentiam b per excessum datum [illegible] potentia minor [illegible] excedit resistentiam illud passum [illegible] potentia potest illud passum pati [illegible] a activum [illegible] activo potest b pati quod est minimum conclusa.

Non sit dare [illegible] [illegible] remissio [illegible] [illegible] intensio [illegible] caliditatis [illegible] sit illud a et arguitur sic a est remissio [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] remissio [illegible]

Sit dare intensissimum gradum quo non est intensior in medio gradus [illegible] caliditatis [illegible] [illegible] caliditatis quo sit a et arguitur sic a est gradus intensior medio gradu, igitur a est intensissimus gradus quo non est intensior medio gradu igitur a est intensissimus gradus quo non est intensior medio gradu [illegible] etc. quia patet et maior est extrema et minor patet sic nullo est gradus intensior medio gradu quam illa est intensior medio gradu et a est medius gradus igitur minimum conclusa etc.

Sit dare maximum quod [illegible] quantitas [illegible] [illegible] potest portare [illegible] [illegible] aliquod [illegible] quod sit equalis potentie [illegible] sit a et arguitur sic a sufficit quantitatem [illegible] portare [illegible] [illegible] sufficit quantitas [illegible] portare igitur a est maximum [illegible] quia patet et maior [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] quantitas [illegible] [illegible] sufficit sit illud b [illegible] [illegible] [illegible] [illegible] plus [illegible] [illegible] sufficit portare [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non est maximum quod quantitas [illegible] sufficit portare [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] quantitas [illegible] excedit [illegible] [illegible] excessu datum [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] est [illegible] [illegible] quantitas [illegible] [illegible] sufficit portare [illegible] [illegible] [illegible] [illegible] quantitas [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] quantitas [illegible] [illegible] excedit [illegible] [illegible] [illegible] excessum datum [illegible] [illegible] [illegible] [illegible] [illegible] non est dandum [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] non est dandum.

Non sit dare minimum quod quantitas [illegible] [illegible] non sufficit portare quia si sic sit illud b et arguitur sic vel minus est vel maius potentia vel minus vel equalis [illegible] [illegible] [illegible] quantitas [illegible] [illegible] sufficit portare b [illegible] equalis [illegible] [illegible] [illegible] [illegible] [illegible] quantitas [illegible] sufficit portare [illegible] b [illegible] potentia [illegible] [illegible] [illegible] quantitas [illegible] [illegible] excedit resistentiam [illegible] quantitas [illegible] [illegible] excedit resistentiam b [illegible] [illegible] non quantitas [illegible] [illegible] sufficit portare [illegible] [illegible] [illegible] quantitas [illegible] [illegible] sufficit portare [illegible] [illegible] minus b [illegible] [illegible] quantitas [illegible] [illegible] sufficit portare [illegible] [illegible] [illegible] [illegible] [illegible] est falsum igitur [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] a [illegible] [illegible] excedit [illegible] [illegible] [illegible] [illegible] excessum [illegible] [illegible] b excedit [illegible] [illegible]

[illegible] a [illegible] non [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] non [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
arguebatur [illegible] [illegible]

¶ [illegible] dare maximum excessum quo [illegible] [illegible] a excedit [illegible] [illegible] ad a [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] excessus [illegible] a excedit [illegible] ad a [illegible] b est magnus excessus quo [illegible] a excedit [illegible] ad a [illegible] excessus est [illegible] b quo [illegible] b est maximus excessus quo [illegible] ad a excedit [illegible] ad a [illegible] [illegible] excessus [illegible] b quo [illegible] a excedit [illegible] ad a [illegible] excessus [illegible] excessum [illegible] [illegible] a [illegible] [illegible] excessum excedit [illegible] ad a [illegible] excessus non est [illegible] b quo [illegible] excedit [illegible] excessum [illegible] excessum [illegible] b [illegible]

¶ [illegible] est dare minimum excessum quo [illegible] a non excedit [illegible] ad a [illegible] excessus [illegible] b [illegible] ad [illegible] ad [illegible] a [illegible] b excessus a [illegible] excedit [illegible] ad a [illegible] b non est minimus quo [illegible] a excedit [illegible] b excessus [illegible] ad [illegible] excessus [illegible] excessum [illegible] non [illegible] excedit [illegible] ad a [illegible] excessus est [illegible] b non est minimus [illegible] excessus [illegible] excessum [illegible] [illegible] a [illegible] [illegible] a [illegible] non [illegible] excessum excedit a [illegible] [illegible]

¶ [illegible] dare maximam [illegible] quam potest pertransire in hac hora quolibet [illegible] velocitate [illegible] [illegible] a [illegible] aliqua [illegible] potest pertransire [illegible] [illegible] a [illegible] velocitate [illegible] b est magna [illegible] quam potest pertransire in hora quolibet [illegible] velocitate

[illegible] a [illegible] [illegible] potest pertransire in hac hora quolibet [illegible] velocitate [illegible] a [illegible] [illegible] [illegible] potest pertransire in hac hora [illegible] [illegible] non potest in hac hora [illegible] velocitate [illegible] a [illegible] non est [illegible] b [illegible] potest in hac hora [illegible] aliquam [illegible] potest pertransire in hac hora [illegible] [illegible] potest [illegible] in hac hora pertransire [illegible] a [illegible] potest [illegible] in hac hora pertransire [illegible] [illegible] potest [illegible] in hac hora pertransire [illegible] est [illegible] [illegible]

¶ [illegible] dare maximam [illegible] quam non potest pertransire in hac hora quolibet [illegible] velocitate [illegible] a [illegible] [illegible] ex [illegible]

¶ [illegible] dare maximum spatium quod uniformiter potest pertransire in hora a [illegible] velocitate uniformiter [illegible] aliqua spatia [illegible] potest pertransire in hora [illegible] a [illegible] velocitate uniformiter [illegible] b [illegible] spatium uniformiter potest pertransire in hora [illegible] a [illegible] velocitate uniformiter potest pertransire in hora a [illegible] velocitate uniformiter [illegible] b est [illegible] spatium uniformiter [illegible] [illegible] [illegible] spatium [illegible] b [illegible] spatium [illegible] uniformiter [illegible] [illegible] [illegible] velocitate [illegible] uniformiter pertransire [illegible]

¶ [illegible] dare minimum spatium quod uniformiter potest pertransire in hora a [illegible] velocitate uniformiter [illegible] [illegible] spatium [illegible] est [illegible] spatium uniformiter potest pertransire in hora a [illegible] velocitate uniformiter [illegible] spatium [illegible] uniformiter [illegible] [illegible] est spatium [illegible] [illegible] uniformiter potest pertransire in hora a [illegible] velocitate uniformiter [illegible] est [illegible] [illegible]

[illegible]

[illegible]

¶ Non est dare ultimum instans in quo non [illegible] probatur quia sequitur [illegible] instans [illegible]
ut patet arguendo sic [illegible] est ultimum instans in quo non poterit a
tangere ergo ita cito poterit a tangere punctum ultimum [illegible] b [illegible] b
[illegible] est falsum [illegible] probatur nam sequitur [illegible] est ultimum instans in quo [illegible] ergo immediate
post [illegible] instans poterit a tangere b sed immediate post [illegible] instans poterit a
tangere punctum ultimum b ergo in [illegible] poterit a tangere punctum ultimum b [illegible] b
[illegible] probatur nam [illegible] puncta ultima b plus distant ab ipso a
quam b et probatur [illegible] a tangere punctum [illegible] quam remotiorem ergo prius poterit
a tangere b quam aliquod punctum ultimum b [illegible] ergo non in [illegible] — 2º arguitur
sic [illegible] sit a immediate post [illegible] poterit tangere b immediate post b instans
ergo prius poterit a tangere b quam esset possibile [illegible] a tangeret [illegible]
[illegible] nam [illegible] et [illegible] arguitur sic ubi a tangeret b
punctum in a [illegible] punctum alium a b sit a tangens b punctum
in [illegible] ergo [illegible] non est ultimum in quo non [illegible] a tangens unum
punctum a b sit illud punctum [illegible] arguitur sic [illegible] punctum cadit [illegible]
et illa [illegible] non [illegible] [illegible] ergo ipso [illegible] [illegible] illa
[illegible] et [illegible] [illegible] a non poterit [illegible] tangere b [illegible]
b [illegible] et [illegible] ergo ipso [illegible] post [illegible] instans [illegible]
a poterit [illegible] b [illegible] ergo non immediate [illegible] quod est [illegible]
[illegible] quod est dare ultimum in quo non [illegible] est primum instans immediate
post quod poterit a tangere b [illegible] est quod non est dare ultimum
instans [illegible] in quo non [illegible] a punctum non poterit [illegible]
esse ergo [illegible] instantia [illegible] non poterit a tangere b [illegible]
[illegible] est ultimum [illegible] [illegible] quod [illegible] poterit a
tangere punctum ultimum b sed b [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
immediate [illegible] [illegible] quod [illegible] est verum ut patet est [illegible]
quod non [illegible] poterit a tangere ipsum b quam ipsum poterit tangere b

¶ Non est dare maximum tempus per quod antixpus poterit esse probatur
quia [illegible] sit illud b tempus [illegible] [illegible] arguitur sic per b
tempus antixpus poterit esse ergo per [illegible] plura instantia b tempus
poterit antixpus esse ergo per ultimum instans b tempus antixpus esse
[illegible] arguitur sic per ultimum instans b tempus poterit antixpus esse ergo [illegible]
ultimum instans [illegible] aliquod instans non posse antixpum cadit tempus [illegible]
[illegible] illud tempus poterit antixpus esse ergo b tempus [illegible]
non fuit maximum [illegible]

¶ Est dare minimum tempus per quod antixpus non poterit esse [illegible] probatur

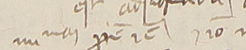
quia dato quod antixpus [illegible] et capio [illegible] tempus [illegible] ab hoc instanti
et [illegible] [illegible] instans non posse antixpum quod tempus sit c [illegible] arguitur sic c est
[illegible] tempus per quod antixpus non poterit esse nec [illegible] et quodcumque assignato [illegible]
[illegible] vel aliquod [illegible] poterit antixpus esse et [illegible] instans [illegible]
poterit antixpus esse [illegible] ergo [illegible] instans non posse esse [illegible] est
falsum ergo illud ex quo sequitur [illegible] arguitur sic et primo [illegible] quod
capio tempus [illegible] instanti [illegible] [illegible] instans
non posse esse antixpum [illegible] [illegible] sic [illegible] tempus non poterit
antixpus esse et illud est minimum [illegible] ergo aliquod est tempus minimum per quod antixpus
non poterit esse et ultimum ergo [illegible] non est minimum [illegible] — 2º arguo
sic quod non est dare [illegible] non posse esse antixpum quod de quocumque instanti
[illegible] [illegible] poterit [illegible] esse ergo instans [illegible] assignatum
non est primum [illegible] [illegible] [illegible] [illegible] ultimum [illegible] [illegible]
aliquod est tempus minimum [illegible] per quod antixpus non poterit esse ergo c non est
minimum per quod non [illegible] sed [illegible] aliquod [illegible] tempus minimum [illegible] per quod
antixpus non poterit nec per aliquod [illegible] ergo c est minimum per quod non [illegible]
et [illegible] est [illegible] [illegible] quod per tempus [illegible] ab hoc instanti
et durat usque ad [illegible] instans c tempus poterit antixpus esse [illegible]
[illegible] [illegible] [illegible] [illegible] instans [illegible] durat usque
ad [illegible] non posse esse antixpum ergo sequitur quod per aliquod [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] quodcumque instans assignato
et [illegible] quod [illegible] instans non posse esse [illegible] non poterit antixpus esse
[illegible] [illegible] ista propositio est impossibilis antixpum [illegible] instans non posse
et [illegible] impossibile [illegible] esse [illegible] [illegible] [illegible] significat [illegible]
et [illegible] significat antixpum esse in [illegible] instanti non posse esse
[illegible] impossibile est antixpum esse in [illegible] instanti non posse esse [illegible]
[illegible] [illegible] [illegible] ergo [illegible]

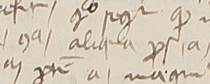
¶ Non est dare primum instans [illegible] in quo [illegible] esse dato
quod [illegible] immediate post hoc [illegible] quod sit [illegible] dare primum
instans [illegible] [illegible] [illegible] instans b [illegible] arguitur sic [illegible] b instans
ergo quod est [illegible] instans cadit tempus medium [illegible] [illegible] [illegible]
[illegible] [illegible] quorum quodlibet instans est [illegible] [illegible] in quo [illegible] instanti
[illegible] [illegible] esse ergo b instans non est primum instans [illegible] in quo
[illegible] esse [illegible] [illegible] [illegible] instans [illegible] assignati
[illegible] sequitur quod non est primum instans [illegible] ergo [illegible] quod non est dare
ultimum instans in quo non poterit esse [illegible] [illegible] [illegible] tempus [illegible] non
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] instantia [illegible]
non [illegible] esse [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] instans [illegible] post
illud et aliquod instans [illegible] et non [illegible] [illegible] [illegible] instans [illegible]
poterit esse [illegible] non [illegible] dare primum instans [illegible] in quo [illegible]

potius esse, vel ultimum instans non quod aliquod est verum de se et hoc falsum ut patet est, sed si sic argueretur aliquis est terminus, futurum instans tunc potius esse et aliquis instans non ut talis terminus [illegible] aliud potius tunc esse, ergo est dare primum terminum futurum instans tunc potius esse vel ultimum instans non [illegible] et tunc est aliquod ipsorum dare cum [illegible] quod tunc [illegible] sic.

Non est dare maximam (a) magnitudinem quam rarefacit. Probatur et suppono quod extrema (a) magnitudinis moveantur versus [illegible] [illegible] [illegible] [illegible] quiescente puncto medio vel admittendo [illegible] motu et cum hoc suppono quod illud rarefaciat cuius maior pars rarefacit, sive quod illud dicatur rarefactum cuius maior pars est rarefacta, istis suppositis arguitur quod non est dare maximam partem [illegible] quia si sit sit [illegible] (a) et arguitur sic vel (b) est minor (a) vel maior vel equalis (a), quod (b) non sit maior (a) patet quia tunc sequeretur quod pars esset maior suo toto, quod est falsum, nec (b) est equalis (a) quia tunc sequeretur quod totum [illegible] [illegible] [illegible] [illegible] quod [illegible] [illegible] [illegible] [illegible] sequitur (b) est pars [illegible], ergo (b) est minor (a) et sequitur ergo [illegible] (a) et (b) sit equalia, ergo (b) non est minor (a) et [illegible] quod [illegible] (b) [illegible] [illegible] (a) a sit equale (a) quod (b) est minor et (b) non est minor (a) [illegible] [illegible] [illegible] [illegible] (b) et [illegible] (a) ut suppono sit (b) et minor a ergo (a) et minor (b) et ultra ergo [illegible] [illegible] (a) est maior (b), [illegible] [illegible] [illegible] motum [illegible] a et b, et capio subiecte totam [illegible] [illegible] [illegible] [illegible] motus, [illegible] rarefacit, et [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] quod pars [illegible] c, et arguitur sic c est pars [illegible] quam rarefacit, sed c est maior b, ergo b non est maxima et [illegible] [illegible] [illegible] ~~[illegible]~~ maior, patet quod ~~[illegible]~~ [illegible] [illegible] et sic possum arguere de c sicut argui de b et de quacumque parte assignanda probando semper quod non est dare maximam partem et cetera.

Non est dare ~~minimam~~ maximam partem (a) magnitudinis quam non rarefacit. Probatur quia nulla est pars assignanda quam non rarefacit quin aliqua pars maior ista est assignanda quam non rarefacit, ergo sequitur quod non est dare minimam partem et cetera, et non [illegible] ista [illegible] aliqua pars (a) magnitudinis rarefacit et aliqua non, ergo est dare maximam partem a magnitudinis quam rarefacit vel minimam quam non, quod aliquod [illegible] et hoc [illegible] ut [illegible] est, sed adhuc quod [illegible] [illegible] [illegible] ~~[illegible]~~ oportet sic arguere aliqua pars (a) magnitudinis rarefacit [illegible] non ut aliqua tanta, ergo est dare maximam et cetera vel minimam quam non et sic valebit quod [illegible] et [illegible] [illegible] suppositis sic et hoc quod nulla pars est assignanda quam rarefacit quin possit assignare aliquam partem equalem quam non rarefacit sicut [illegible] [illegible] capio quamcumque totam [illegible] (a) magnitudinis quam non rarefacit cum motu [illegible] [illegible] non ~~rarefacit~~ [illegible] pars rarefacit ut patet [illegible]

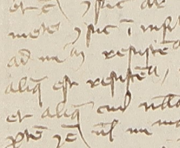




assigno subiecte totam motus (a) quam non rarefacit cum motu motus a quam rarefacit illud pars non rarefacit ut patet quia maior pars ibi non rarefacit et nulla pars est equalis, [illegible] partem [illegible] et adhuc est medium [illegible] partem data ergo non aliquid tanta non rarefacit sicut rarefacit et cetera.

Non est dare maximam resistentiam difformem cuius aliqua pars superior a dividendo divisibilis. Probatur assigno unam latitudinem resistentie [illegible] a non quantum resistentie [illegible] [illegible] [illegible] et sit a unum dividens cuius [illegible] sit equalis [illegible] [illegible] [illegible] resistentie [illegible] sit b, istis suppositis probatur quod non est dare maximam et cetera quia si sic sit b, quod arguitur sic b est maxima resistentia difformis cuius aliqua pars superior a dividendo divisibilis et nulla est resistentia maior b cuius aliqua pars superior a dividendo divisibilis, [illegible] [illegible] [illegible] est falsum, ergo [illegible] [illegible] arguitur et assigno unam aliam latitudinem resistentie [illegible] a [illegible] [illegible] [illegible] et [illegible] [illegible] [illegible] resistentie sit c et arguitur sic c est resistentia difformis cuius aliqua pars superior (a) dividendo divisibilis et c [illegible] est maior b, ergo aliqua est resistentia maior b cuius aliqua pars superior (a) dividendo divisibilis, et ultra ergo [illegible] falsum quod nulla est [illegible] maior b cuius aliqua pars superior a dividendo divisibilis [illegible] patet [illegible] [illegible] [illegible] [illegible] superior a dividendo divisibilis ut patet ex primo casu, ergo [illegible] et sic arguitur de b et de c sicut possum arguere de quacumque [illegible] difformi assignata [illegible] [illegible] quod non est dare maximam et cetera.

Non est dare minimam resistentiam difformem cuius nullam partem superior a dividendo divisibilis. Probatur quia si sic sit illa resistentia difformis b, et arguitur quod non est dare minimam et cetera, quod extra [illegible] b resistentia non est difformis [illegible] quod [illegible] [illegible] est minor resistentia quam ipsa ~~tota~~ tota et [illegible] sit illa [illegible] c et arguitur sic c est aliqua resistentia cuius nullam partem superior a dividendo divisibilis et c est minor b, ergo b non est minima et cetera et sic arguitur de b et [illegible] [illegible] sic possum arguere de c et [illegible] [illegible] et sic in infinitum [illegible] [illegible] [illegible] [illegible] [illegible] b et [illegible] [illegible] [illegible] ad minimam resistentiam difformem cuius nullam partem et cetera, et non [illegible] ista [illegible] aliqua est resistentia difformis cuius aliqua pars superior a dividendo divisibilis et aliqua cuius nullam partem, ergo est dare maximam resistentiam cuius aliqua pars et cetera vel minimam cuius nullam et cetera quia aliquod est verum [illegible] [illegible] primo ut patet est, sed adhuc quod [illegible] [illegible] oportet sic arguere aliqua est resistentia difformis cuius aliqua pars et cetera [illegible] est resistentia difformis cuius non aliqua resistentia difformis tanta superior (a) aliqua pars dividendi, ergo est dare maximam cuius aliqua pars et cetera vel minimam cuius nullam et cetera sed ambo [illegible] est falsum [illegible] [illegible] nulla est resistentia ~~tota~~ ~~tota~~ [illegible] [illegible] b vel aliqua tanta superior (a) aliqua pars dividendi ergo data aliqua resistentia difformis cuius ~~aliqua~~ nullam pars superior a dividendo divisibilis [illegible] [illegible] [illegible] unam resistentiam maiorem ista cuius aliqua pars superior



a[d] duplum dupli, et sic in infinitum, igitur conclusio vera. Quod est [illegible]

℘ Non potest dari intensissima caliditas difformis cuius nulla pars est intensior (a). Quia sit calidum [illegible] et accipio unam latitudinem caliditatis uniformem [illegible] caliditatis [illegible] ad medium gradum [illegible] talis, propositum arguitur quod non potest dari intensissima, [illegible] pars [illegible] b, [illegible] quod non quia aliqua est caliditas intensior b, cuius nulla pars est intensior (a) [illegible] caliditatem quam b, non est intensissima caliditas intensior [illegible] et accipio [illegible] ad quem [illegible] b, [illegible] caliditatis [illegible] caliditas [illegible] accipio totam latitudinem caliditatis [illegible] ad medium [illegible] latitudinis, [illegible] modo arguitur sic: c est caliditas difformis, intensior b, cuius nulla pars est intensior a, quod [illegible] non est intensissima caliditas [illegible] ad [illegible] potest dari [illegible] maxime [illegible] caliditas [illegible] latitudinis [illegible] excedit caliditatem [illegible] b [illegible] accipio unam caliditatem difformem cuius una quarta [illegible] quarta [illegible] caliditas [illegible] c est caliditas difformis, intensior b, cuius nulla pars est intensior a, quod b non est intensissima caliditas difformis cuius nulla pars est intensior a [illegible] cuius [illegible] c est intensior [illegible] b [illegible] maxime intensioris [illegible] b [illegible] caliditas difformis, intensior b, cuius nulla pars [illegible] quod [illegible] non est intensissima [illegible] unam caliditatem [illegible] quarta [illegible] potentia intensa [illegible] non potest [illegible]

℘ Non potest dari remississima caliditas difformis cuius nulla pars est intensior a [illegible] caliditas [illegible] nulla est caliditas remissa difformis cuius aliqua est intensior a [illegible] unam aliam caliditatem [illegible] caliditas difformis remissior illa cuius aliqua pars est intensior a, [illegible] non est dare remississimam caliditatem difformem cuius [illegible] aliqua [illegible] dare unam caliditatem difformem [illegible] intensiorem [illegible] est remissior [illegible] b [illegible] una caliditas cuius una quarta [illegible] quarta [illegible] b [illegible] c una alia caliditas difformis cuius una quarta [illegible] b, est remissior [illegible] remissior [illegible] intensior [illegible] quarta [illegible] tertia [illegible] intensior [illegible]

aliquam aliam esse caliditatem difformem cuius aliqua pars est intensior a, quia caliditas aliqua est caliditas difformis cuius nulla pars [illegible] aliqua pars alterius caliditatis difformis [illegible] remissior [illegible] intensior a [illegible] caliditas [illegible] est dare remississimam cuius nulla pars [illegible] remississima cuius aliqua pars [illegible] est [illegible] falsum [illegible] ut clare patet ex praedictis [illegible]

℘ Non potest dari minima potentia quae sufficit portare pondus a [illegible] quia [illegible] alia potentia b [illegible] b [illegible] potentia [illegible] potentia quae sufficit portare a [illegible] a [illegible] est maxima quam b potentia [illegible] sufficit portare [illegible] falsum [illegible] alia [illegible] repugnat [illegible] repugnat b est minima potentia [illegible] a non est maxima quam b [illegible] b est minima potentia quae sufficit portare [illegible] a non est maxima quam b sufficit portare [illegible] maior a sufficit portare b portare [illegible] b est minima potentia quae sufficit portare [illegible] aliqua pondera maiora quam b sufficit portare [illegible] ad [illegible] pondus [illegible] b potentia ad aliam potentiam [illegible] a pondus [illegible] b sufficit portare [illegible] alia potentia minor b sufficit [illegible] b [illegible] a [illegible] b non est minima quae sufficit portare [illegible] portare [illegible]

℘ Non potest dari maxima potentia quae non sufficit portare pondus a [illegible] alia potentia [illegible] non est maxima potentia quae non sufficit [illegible] potentia maior [illegible] sufficit portare [illegible] a [illegible] aequalia [illegible] alia potentia maior [illegible] non sufficit [illegible] non est maxima [illegible] a non potest [illegible] resistentia [illegible] falsum [illegible] resistentia [illegible] in duplo [illegible] in duplo [illegible] in infinitum [illegible] non [illegible] resistentia [illegible] falsitas [illegible] quod non sufficit portare [illegible] non potest [illegible] resistentia [illegible] non potest dari maxima potentia [illegible] non sufficit portare [illegible] non sufficit portare [illegible] a non potest [illegible] resistentia [illegible] in infinitum [illegible] est alia potentia quae [illegible]

p[ro] responsione illi[us] i[n]stancie / d[icitu]r dato q[uod] illa p[otenti]a esset i[n]debilitabilis
nu[n]q[uam] deperderet, a que ca[usa] p[er]it — d[icitu]r q[uod] p[er]trahe[n]t sic dato
q[uod] c sit vna p[otenti]a mutabilis sic i[n]debilitabilis [contra] superiore[m]
et [contra]p[ositi]o, ar[guitur] sic c et d s[un]t p[otenti]e equales et sic c superiorem poss[et]
a [illegible] g[ra]d[us] d superiorem possit d, [illegible] equales — s[ecundu]m [illegible]
q[uod] duplex est / responsio / vna responsio negat / negat ca[us]a[m]
et d[icitu]r q[uod] c et d no[n] s[un]t [com]parabiles ad i[n]vice[m] q[uia] s[un]t diu[er]se sp[eci]ei et
ponet illam responsione[m] s[ecundu]m m[od]u[m] q[uod] c [con]tinue superiorem fore [illegible]
superiore illa responsio negat ~~illam~~ [illegible] a 7b s[un]t equales
[illegible] superiores ad portandu[m] a 7c sic portare d g[radu]s [illegible] q[uod] adeq[ua]
[com]parat[ur] [illegible] posse est / and [illegible] 7 [illegible] falsum /

8] Circa dubiu[m] [illegible] ~~[illegible]~~ p[otenti]e ~~[illegible]~~ active q[uo]d plures [illegible] sunt /
[illegible] [illegible] [illegible] [illegible] [illegible] / [illegible] et p[rim]o [illegible] p[otenti]e
active [illegible] [illegible] [illegible] [illegible] est [illegible] motum [illegible]
= [illegible] q[ui] [illegible] [illegible] sit dare maxi[mu]m [illegible] q[uod] potest p[otenti]a [illegible] vel
mi[ni]m[u]m q[uod] no[n] p[otest] / et ar[guitur] p[rim]o q[uod] sit dare maxi[mu]m / [illegible] p[otenti]e / active [illegible] est
dare maxi[mu]m q[uod] p[otest] [illegible] p[otenti]a p[otes]t est p[otenti]a activa [illegible] q[ui] [illegible] / [illegible] q[ui]
est dare maxi[mu]m q[uod] p[otes]t p[otenti]a [illegible] / [illegible] [illegible] [illegible] / q[uod] [illegible] talis
p[otenti]a / est [illegible] / [illegible] q[uod] no[n] p[otest] [illegible] [illegible] est [illegible] [illegible] / [illegible]
q[ui] [illegible] [illegible] q[uod] [illegible] / est [illegible] q[ui] [illegible] ad [illegible] / p[otes]t talis p[otenti]a / et no[n] [illegible]
q[ui] [illegible] / est maxi[mu]m [illegible] q[uod] talis / p[otenti]a [illegible] [illegible] [illegible] [illegible] / [illegible] 2o
2o [illegible] potest [illegible] [illegible] [illegible] [illegible] et mouetur [illegible] [illegible] [illegible] p[otes]t / [illegible] vel
q[ui] moueb[itu]r [illegible] ~~vel no[n]~~ / [illegible] [illegible] moueb[itu]r et p[otes]t p[otenti]e p[otenti]e [illegible]
q[uod] [illegible] [illegible] / [illegible] [illegible] [illegible] est [illegible] p[otenti]e / [illegible] [illegible] [illegible] [illegible] est [illegible]
p[otenti]e / [illegible] [illegible] q[ui] [illegible] [illegible] [illegible] et [illegible] p[otenti]e [illegible] [illegible] sic [illegible]
[illegible] [illegible] [illegible] q[ui] [illegible] [illegible] p[otes]t [illegible] q[uod] potest p[otes]t [illegible] [illegible] [illegible]
/ [illegible] no[n] moueb[itu]r [illegible] [illegible] [illegible] q[ui] [illegible] [illegible] / [illegible] q[ui] q[uod] [illegible]
[illegible] / [illegible] q[ui] [illegible] ad [illegible] / [illegible] est maxi[mu]m [illegible] q[uod] potest p[otes]t [illegible]
[illegible] 3o potest no[n] p[otes]t [illegible] [illegible] [illegible] q[ui] no[n] p[otes]t [illegible] [illegible] [illegible] 3o
q[ui] est dandu[m] maxi[mu]m [illegible] q[uod] potest p[otes]t [illegible] / vel [illegible] q[uod] potest p[otes]t [illegible]
[illegible] est [illegible] no[n] [illegible] / [illegible] [illegible] q[uod] potest no[n] p[otes]t [illegible] vel est [illegible]
[illegible] q[ui] no[n] p[otes]t [illegible] [illegible] [illegible] [illegible] 4o [illegible] potest [illegible] / [illegible] 4o
[illegible] [illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] et [illegible] [illegible] [illegible] /
[illegible] [illegible] / [illegible] [illegible] est / q[uod] [illegible] [illegible] et [illegible] [illegible] [illegible] est maxi[mu]m
[illegible] q[uod] potest [illegible] / [illegible] no[n] potest [illegible] / q[uod] no[n] [illegible] [illegible]
q[ui] [illegible] no[n] potest [illegible] q[ui] [illegible] ad [illegible] / [illegible] / [illegible] [illegible] [illegible] no[n]
potest [illegible] / [illegible] est [illegible] maxi[mu]m [illegible] q[uod] est [illegible] [illegible] q[ui]
est dare maxi[mu]m [illegible] q[uod] potest p[otes]t [illegible] / [illegible] ex hoc [illegible] [illegible] [illegible]
q[uod] [illegible] [illegible] q[uod] est no[n] p[otes]t [illegible] / [illegible] [illegible] [illegible] [illegible] 3o [illegible] q[ui]
[illegible] q[uod] no[n] est [illegible] active [illegible] q[ui] [illegible] [illegible] est [illegible] q[ui] [illegible] [illegible] est
maxi[mu]m [illegible] = [illegible] / [illegible] potest [illegible] / a / [illegible] sic potest p[otes]t [illegible] Opp[ositu]m
a [illegible] [illegible] [illegible] / q[ui] [illegible] [illegible] [illegible] / [illegible] [illegible] q[ui] / a / no[n] est maxi[mu]m
[illegible] q[uod] potest p[otes]t [illegible] / [illegible] [illegible] [illegible] / q[ui] [illegible] [illegible] [illegible]
[illegible] q[uod] [illegible] [illegible] [illegible] ad [illegible] est sic [illegible] [illegible] ad
[illegible] [illegible] q[ui] [illegible] [illegible] [illegible] [illegible] sic [illegible] [illegible] et [illegible]
plus [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] p[otenti]a p[otes]t [illegible]
// 2o no[n] est dare maxi[mu]m [illegible] [illegible] q[uod] potest p[otes]t [illegible] q[ui] [illegible] [illegible] est no[n] / [illegible]
[illegible] q[uod] [illegible] sic [illegible] [illegible] / a / [illegible] [illegible] / a / p[otes]t [illegible] [illegible] [illegible] potest
q[ui] [illegible] / [illegible] [illegible] = [illegible] [illegible] [illegible] / [illegible] [illegible] [illegible] [illegible]
[illegible] q[uod] duplex [illegible] p[otenti]a / [illegible] p[otenti]a passiva / activa / [illegible] [illegible] [illegible]
p[otenti]a activa est [illegible] [illegible] [illegible] [illegible] aliud // p[otenti]a no[n] passiva
sic / p[otenti]a passiva est [illegible] [illegible] [illegible] [illegible] aliud // 2a [illegible] est
q[uod] [illegible] [illegible] maxi[mu]m / [illegible] [illegible] [illegible] vel ex [illegible] [illegible] vel [illegible] / ex [illegible]
[illegible] [illegible] / maxi[mu]m est [illegible] q[uod] est magnu[m] [illegible] no[n] est [illegible]
~~[illegible]~~ et sic ex p[otes]t [illegible] [illegible] [illegible] [illegible] / [illegible] [illegible] ex p[otenti]e
/ [illegible] maxi[mu]m est [illegible] q[uod] est magnu[m] [illegible] no[n] est [illegible] magnu[m] / ~~[illegible]~~ sic

3ª distinctio

et sic exponatur [illegible] potentiam potentia [illegible] exponimus cum hoc adverbio
cum hoc adverbio vel et [illegible] simpliciter diceretur [illegible]. De isto vero minimum et
hoc est quod aliqui voluerunt dicere quod [illegible] potest ex parte [illegible]
[illegible]

[illegible]

et quidem [illegible] magnitudine [illegible]
et ista [illegible]
quod est quod non est dare maximum quod potest [illegible]
[illegible]

[illegible]

[illegible] quantum spatium cum illa velocitate [illegible] maximo ponderi quod potest pertransire [illegible] spatium cum tanta velocitate [illegible] illud est maximum spatium quod potest pertransire [illegible] maximo spatio quod potest pertransire cum illa velocitate [illegible] illud est maximum quod potest pertransire cum illa velocitate quod est dare maximum spatium quod potest pertransire — ad 2m

[illegible] quod potest non [illegible] per motum sicut per motum quod quodcumque tempore dato potest pertransire [illegible] potentia extrinseca [illegible] loquitur de potentia [illegible] spatialiter imaginarie [illegible] admittit casus [illegible] sicut potest per motum movebitur et ultra dicitur quod cum admisso non movebitur [illegible] et ultra [illegible] quod aliquod spatium [illegible] admittitur quod [illegible] ad a [illegible] est maximum spatium quod potest pertransire [illegible] — ad 3m dicitur [illegible] loquendo [illegible] potest [illegible] spatium non pertransire [illegible] est dare [illegible] — ad 4m dicitur admittendo casum [illegible] est dando ultimum [illegible] potest [illegible] est dando [illegible] maximum spatium quod pertransire [illegible] illud non est maximum spatium quod pertransire [illegible] — ad [illegible] est dare [illegible] quod maius spatium [illegible] non pertransire [illegible] est quod non est aliud [illegible] spatium [illegible] — ad [illegible] non [illegible] est [illegible]

Consequenter queritur utrum sit dare maximum quod potest pertransire [illegible] non potest [illegible] posse [illegible] maximum [illegible] non est dare [illegible] maius [illegible] quod [illegible] [illegible] est maximum quod potest [illegible] est maius [illegible] facere [illegible] possit [illegible] est maximum quod potest pertransire [illegible] sicut [illegible] elevare [illegible] pondus [illegible] spatium [illegible] cum tanta velocitate [illegible] posse [illegible] est dare maximum [illegible] quod potest pertransire [illegible] maximum quod [illegible] est dare maximum quod

[illegible] non potest [illegible]

potest pertransire [illegible] non est dare maximum quod sit [illegible] potentia extrinseca [illegible] est dare maximum [illegible] potentia [illegible] nulla [illegible] spatialiter [illegible] est dare maximam potentiam nullam [illegible] non est nullus [illegible] augmentatur [illegible] non est dare maximam potentiam quam potest pertransire [illegible] quod non est dare maximum quod potest pertransire [illegible] quod est dare maximam potentiam quam potest pertransire [illegible] nullam [illegible] spatialiter [illegible] — ad 2m — ad 3m dicitur admittendo [illegible] est maximum quod potest pertransire et ultra dicitur quod posse [illegible] posse [illegible] non [illegible] posse [illegible] non potest [illegible] — ad [illegible] sicut [illegible] predicta.

Consequenter queritur utrum sit dare maximam potentiam nullam potentiam per aliquam resistentiam — quod sit est dare [illegible] maximam potentiam quam potest [illegible] per aliquam [illegible] per aliquam resistentiam [illegible] maxima potentia [illegible] aliquam resistentiam [illegible] potentia [illegible] per aliquam resistentiam [illegible] est [illegible] potentia [illegible] per aliquam resistentiam [illegible] non est dare maximam potentiam nullam [illegible] aliquam resistentiam [illegible] maxima potentia [illegible] non est dare maximam potentiam [illegible] potentia nulla [illegible]

[illegible]

[illegible]

Consequenter queritur utrum sit dare maximum spatium quod aliquod agens [illegible]

[illegible]

compertur de aere [illegible] per ignem [illegible] quod illo casu [illegible] ignis non potest [illegible]
factor [illegible] ignis [illegible] augmentat [illegible] potest augeri et [illegible]
2o [illegible] ubi multi [illegible] et [illegible] augmento et
magnitudo [illegible] infinitum potest ignis augmentari [illegible] non est
dare maximum [illegible] motu augmento potest agere [illegible]
est [illegible] non est dare maximum et [illegible]
[illegible] infinitum potest ignis augmentari [illegible] combustibile [illegible] apponere
[illegible] combustibile [illegible] infinitum ignis
augmentabitur [illegible] phys[illegible]
[illegible] ignis est [illegible] aeris [illegible]
[illegible]
combustibile [illegible] ignis posset augmentari [illegible]
[illegible] non posset [illegible]
[illegible]
[illegible]
[illegible]
[illegible] non est dare maximum [illegible] motu augmento
[illegible] motu augmento [illegible]
[illegible]

[illegible] infinitum non potest augmentari [illegible]
[illegible] ignis [illegible] non [illegible] augeri [illegible]
[illegible] non potest dare maximum [illegible] augmentari [illegible]
[illegible]
[illegible]
[illegible]

[illegible] non potest dare maximum [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

a et b erit equalis / et a [illegible] ad d / [illegible] in 2° velocitatis augebitur
quam b / per casum quod sit [illegible] ad d / [illegible] / et similiter et per hoc per magnum tempus
[illegible] patet per eorum modernorum opinionem [illegible] alia via / patet / ponitur per
quod accendat velocitas augmenti [illegible] potentia agentis proportionis [illegible]
[illegible] quod non [illegible] quod habeat eandem potentiam maximam [illegible] qua
ageret [illegible] vel alia [illegible] esset unum [illegible]
et una [illegible] quod ageret unum pedale [illegible]
ita velocitatis augmentabit [illegible] unum [illegible] quod [illegible]
[illegible] unum [illegible] augmenta [illegible] ad [illegible]
[illegible] non [illegible] ad [illegible] proportionem [illegible]
[illegible] quod velocitas augmenti [illegible] eandem
[illegible] qua ageret [illegible] vel [illegible] ipsa [illegible] potentia
[illegible] velocitas augmenti [illegible]
[illegible] non [illegible] augmenti [illegible] velocitas
[illegible] augmenti [illegible] proportionem [illegible]
[illegible] velocitas [illegible] ad non [illegible]
[illegible] proportionem [illegible] ex [illegible] quod [illegible]
non [illegible] augmenti [illegible] augmenti [illegible]
[illegible] velocitas augmenti [illegible] velocitas [illegible]
augmenti [illegible] augmenti [illegible] = 2° non quod velocitas
augmenti non [illegible] eandem potentiam proportionis [illegible] agendo
[illegible] eandem potentiam proportionis [illegible]
[illegible] ad [illegible]
[illegible] esset [illegible] hac hora [illegible] augmentabit ad [illegible]
[illegible] non esset pedale [illegible] ex novo / et [illegible]
[illegible] et [illegible] = [illegible]
[illegible] adproportionem [illegible]
[illegible] a et b / [illegible] et [illegible]
[illegible] non [illegible] a / et hoc [illegible] est [illegible]
[illegible] ad [illegible] a / [illegible] augmenti ad [illegible]
[illegible] quod ageret [illegible] non [illegible] quod ageret [illegible]
velocitas augmenti non [illegible] potentia proportionis [illegible]
[illegible] ad [illegible] potentia [illegible] = ad
[illegible] ipsa [illegible] a / [illegible]
in 2° velocitatis [illegible] b / quod hoc est impossibile [illegible]
[illegible] / quod [illegible]

[illegible]

p° q^a vocat^r spera q incipit physicus no etc
Item q^o magna ... horum de ... ione stellis
Item q^{ones} magna ... de ...
Item q^{ones} magna ... de ...
Item ... de ...
Item q^{ones} de ...

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